Riley McGlasson

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Education

Purdue University — **West Lafayette, IN**
PhD, Planetary Sciences, 3.91/4.0 — *2020 – Present*

Macalester College — **Saint Paul, MN**
Bachelor of Arts in Physics (with Astronomy emphasis) and Mathematics minor, 3.77/4.0 — *2016 – 2020*

Acquincum Institute of Technology, Budapesti Műszaki Egyetem — **Budapest, Hungary**
Semester in Computer Science Abroad, 4.67/5.0 — *Fall 2018*

Research Experience and Professional Preparation

Purdue University — **West Lafayette, IN**
Advisor: Dr. Ali Bramson — *August 2020 – Present*

- Analyzing SHARAD radar observations of ice deposits in Martian craters

Astronomy Ranger Intern — **Bryce Canyon National Park, Utah**
Advisors: Dr. Anil Seth and Todd Cullins — *Summer 2019*

- Developed and presented astronomy interpretive programs.
- Led educational "telescope tours" of planets, constellations, and deep sky objects to visitors of Bryce Canyon National Park.
- Led monthly full moon hikes into Bryce Canyon while educating hikers about the science and cultural importance of our moon.
- Presented "A Message to the Universe", a public talk about the Voyager missions, at the Bryce Canyon Annual Astronomy Festival.

Arecibo Observatory REU — **Arecibo, Puerto Rico**
Advisors: Dr. Sean Marshall and Dr. Flaviane Venditti — *Summer 2018*

- Developed a shape model for the potentially hazardous asteroid Midas.
- Performed approximately 50 radar observations of near-Earth asteroids using the Arecibo 305 meter radio telescope.

University of Alabama in Huntsville/NASA MSFC Heliophysics REU — **Huntsville, AL**
Advisor: Dr. Navdeep Panesar — *Summer 2017*

- Studied the magnetic origins of solar coronal jets.

First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies — **Saint Paul, MN**
Advisor: Prof. John Cannon — *Spring 2017*

- Imaged two nearby dwarf galaxies in the HI 21cm spectral line.

Arecibo Pisces-Perseus Supercluster Survey — **Saint Paul, MN**
Advisor: Prof. John Cannon — *Spring 2017*

- Determined cluster membership for galaxies around the Pisces-Perseus Supercluster.

Peer-Reviewed Publications

1. **McGlasson, R. A.**, Panesar, N. K., Sterling, A. C., Moore, R. L., 2019. Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets. The Astrophysical Journal, 882, 16.
2. Cannon, J.M., Shen, Z., et al.**(incl. McGlasson, R. A.)**, 2018. Delayed Stellar Mass Assembly in the Low Surface Brightness Dwarf Galaxy KDG 215. The Astrophysical Journal Letters, 864, L14.
3. Bralts-Kelly, L., Bulatek, A. M., et al. **(incl. McGlasson, R. A.)**, 2017. First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies. The Astrophysical Journal Letters, 848, L10.

Conference Posters and Presentations

* Indicates McGlasson is presenting author
† Indicates oral presentation

1. *†**McGlasson, R. A.**, Bramson, A. M., Morgan, G. A., Sori, M. M., (2021). Subsurface Radar Observations of Outlier Polar Ice Deposits on Mars. 52nd Lunar and Planetary Science Conference, #1649.
2. Repp, D. W., Marshall, S. E., et al. **(incl. McGlasson, R. A.)**, (2020). Shape modeling of potentially hazardous asteroid 2015 DP155 from radar and lightcurve observations. 51st Lunar and Planetary Science Conference, #2897.
3. Taylor, P. A., Rivera-Valentín, E. G., **(incl. McGlasson, R. A.)**, (2019). Radar and Optical Observations of Equal-Mass Binary Near-Earth Asteroids (190166) 2005 UP156 and 2017 YE5. 50th Lunar and Planetary Science Conference, #2945.
4. ***McGlasson, R. A.**, Marshall, S. E., et al., (2019). Shape Model of Potentially Hazardous Asteroid (1981) Midas from Radar and Lightcurve Observations. American Astronomical Society Meeting #233, 255.03.
5. Taylor, P. A., Brozovic, M., et al. **(incl. McGlasson, R. A.)**, (2018). Radar and Optical Observations of Equal-Mass Binary Near-Earth Asteroid 2017 YE5. American Astronomical Society Division of Planetary Sciences meeting #50, 508.07.
6. Marshall, S. E., Cobb, A., et al. **(incl. McGlasson, R. A.)**, (2018). Using Bayesian Optimization to Find Asteroids' Pole Directions. American Astronomical Society Division of Planetary Sciences meeting #50, 505.01D.
7. ***McGlasson, R. A.**, Panesar, N. K., Sterling, A. C., Moore, R. L., (2017). Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets. American Geophysical Union Fall Meeting 2017, #SH43A-2796.

Awards

NSF Graduate Research Fellowship Program, Honorable Mention: *2021*

Lunar and Planetary Institute Career Development Award: *2021*
52nd Lunar and Planetary Science Conference

Chambliss Astronomy Achievement Award Student Prize: *2019*
American Astronomical Society 233rd meeting

Minnesota Space Grant Consortium Scholarship: *2018*

Mobil Scholarship: *Fall 2017 – Spring 2020*

DeWitt Wallace Distinguished Scholarship: *Fall 2016 – Spring 2020*

Technical Skills

Python | IDL | Latex | Java | Perl | Mathematica | Bash | Microsoft Office | ArcGIS

Teaching Experience

Physical Geology Teaching Assistant: *Fall 2020, Fall 2021*
- Undergraduate Lab TA for Purdue introductory geology class

Astronomy Preceptor: *Spring 2020*
- Undergraduate preceptor for Macalester upper-level observational astronomy course

Astronomy Preceptor: *Spring 2019*
- Undergraduate preceptor for Macalester introductory Modern astronomy course

Volunteer Service and Outreach

Astronomy on Tap Organizer: Established and serve as primary organizer for the Lafayette, IN satellite series of "Astronomy on Tap". *Fall 2021 – Present*

Radio Host: Radio Astronomy – Macalester College's astronomy talk show *Fall 2017 – Spring 2020*

Host and Telescope Operator: Macalester College Public Observing Nights *Fall 2017, Fall 2019*

Arecibo Observatory Noche de Observación: "Ask a Scientist" booth *Summer 2018*

NASA in the Park Presenter: Presented vacuum chamber experiments to the public at the annual NASA in the Park event, Huntsville, AL *June 2017*

Astronomy Guest Speaker: Minnetonka Middle School East 8th grade science classes *Spring 2018*

Astronomy Presenter: Eden Prairie High School AP Physics classes *Spring 2017*

Destination Imagination Volunteer: judge for Destination Imagination, a global creative problem solving competition *January 2017 – January 2020*