

Riley McGlasson

✉ rmcglass@purdue.edu

Education

Purdue University

PhD, Planetary Sciences, 3.83/4.0

West Lafayette, IN

2020–Present

Macalester College

Bachelor of Arts in Physics (with Astronomy emphasis) and Mathematics minor, 3.77/4.0

Saint Paul, MN

2016–2020

Acquincum Institute of Technology, Budapesti Műszaki Egyetem

Semester in Computer Science Abroad, 4.67/5.0

Budapest, Hungary

Fall 2018

Research Experience and Professional Preparation

Purdue University

Advisor: Dr. Ali Bramson

West Lafayette, IN

Ongoing

- Analyzing SHARAD radar observations of ice deposits in Martian craters

Astronomy Ranger Intern

Advisors: Dr. Anil Seth and Todd Cullins

Bryce Canyon National Park, Utah

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

Advisors: Dr. Sean Marshall and Dr. Flaviane Venditti

Arecibo, Puerto Rico

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

Advisor: Dr. Navdeep Panesar

Huntsville, AL

Summer 2017

- Studied the magnetic origins of solar coronal jets.

First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies

Advisor: Prof. John Cannon

Saint Paul, MN

Spring 2017

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

Arecibo Pisces-Perseus Supercluster Survey

Advisor: Prof. John Cannon

Saint Paul, MN

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., McQuinn, K. B. W, Bartz, J., Bralts-Kelly, L., Bulatek, A. B., Chinski, S., Ford, R. N., Gordon, A. J. R., Helmel, G., Hollenbach, S., McGlasson, R. A., Mizener, A., Page, T., Retza, W., Rusch, M., Taft, S., Dolphin, A. E., Karachentsev, I., Salzer, J. J., 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., Chinski, S., Ford, R., Gilbonio, H., Helmel, G., McGlasson, R.,

Mizener, A., Cannon, J. M., Kaisin, S., Karachentsev, I., Denn, G., 2017. First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies. *The Astrophysical Journal Letters*, 848, L10.

Scientific Presentations

- 233rd Meeting of the American Astronomical Society:** Poster *January 2019*
- Shape Model of Potentially Hazardous Asteroid (1981) Midas from Radar and Lightcurve Observations
- American Geophysical Union Fall Meeting:** Poster *December 2017*
- Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets
- Macalester College Student Research Poster Session:** Poster *October 2017*
- Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets

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 2106 – Spring 2020*

Technical Skills

Languages (proficiency): Python (intermediate) | IDL (intermediate) | Latex (intermediate) | Java (intermediate) | Perl (basic) | Mathematica (basic) | Bash (basic) | MatLab (basic)

Teaching Experience

- Physical Geology Teaching Assistant:** *Fall 2020*
- 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

- 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*