

# Riley McGlasson

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## Education

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### Purdue University

*PhD, Planetary Sciences, 3.91/4.0*

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

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### 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

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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

<b>52nd Lunar and Planetary Science Conference:</b> Oral Presentation	<i>March 2021</i>
◦ Subsurface Radar Observations of Outlier Polar Ice Deposits on Mars	
<b>233rd Meeting of the American Astronomical Society:</b> Poster	<i>January 2019</i>
◦ Shape Model of Potentially Hazardous Asteroid (1981) Midas from Radar and Lightcurve Observations	
<b>American Geophysical Union Fall Meeting:</b> Poster	<i>December 2017</i>
◦ Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets	
<b>Macalester College Student Research Poster Session:</b> Poster	<i>October 2017</i>
◦ Magnetic Flux Cancellation as the Trigger Mechanism of Solar Coronal Jets	

## Awards

<b>NSF Graduate Research Fellowship Program, Honorable Mention:</b>	<i>2021</i>
<b>Lunar and Planetary Institute Career Development Award:</b>	<i>2021</i>
<i>52nd Lunar and Planetary Science Conference</i>	
<b>Chambliss Astronomy Achievement Award Student Prize:</b>	<i>2019</i>
<i>American Astronomical Society 233rd meeting</i>	
<b>Minnesota Space Grant Consortium Scholarship:</b>	<i>2018</i>
<b>Mobil Scholarship:</b>	<i>Fall 2017 – Spring 2020</i>
<b>DeWitt Wallace Distinguished Scholarship:</b>	<i>Fall 2106 – Spring 2020</i>

## Technical Skills

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

## Teaching Experience

<b>Physical Geology Teaching Assistant:</b>	<i>Fall 2020</i>
◦ Undergraduate Lab TA for Purdue introductory geology class	
<b>Astronomy Preceptor:</b>	<i>Spring 2020</i>
◦ Undergraduate preceptor for Macalester upper-level observational astronomy course	
<b>Astronomy Preceptor:</b>	<i>Spring 2019</i>
◦ Undergraduate preceptor for Macalester introductory Modern astronomy course	

## Volunteer Service and Outreach

<b>Radio Host:</b> Radio Astronomy – Macalester College’s astronomy talk show	<i>Fall 2017 – Spring 2020</i>
<b>Host and Telescope Operator:</b> Macalester College Public Observing Nights	<i>Fall 2017, Fall 2019</i>
<b>Arecibo Observatory Noche de Observación:</b> “Ask a Scientist” booth	<i>Summer 2018</i>
<b>NASA in the Park Presenter:</b> Presented vacuum chamber experiments to the public at the annual NASA in the Park event, Huntsville, AL	<i>June 2017</i>
<b>Astronomy Guest Speaker:</b> Minnetonka Middle School East 8th grade science classes	<i>Spring 2018</i>
<b>Astronomy Presenter:</b> Eden Prairie High School AP Physics classes	<i>Spring 2017</i>
<b>Destination Imagination Volunteer:</b> judge for Destination Imagination, a global creative problem solving competition	<i>January 2017 – January 2020</i>