

Lilly Bralts-Kelly

1600 Grand Avenue ◊ Saint Paul, MN 55105
lbraltsk@macalester.edu ◊ lbraltsk.github.io

Education

Macalester College

B.A. Physics (Astronomy), Mathematics
Cumulative GPA: 3.98/4.00

August 2016 – May 2020 (expected)

Relevant Experience

La Serena School for Data Science

AURA Observatory in Chile.

Intensive ten-day school on data handling in astronomical and biological environments.

August 2018

NSF REU

University of Michigan, advised by Dr. Joshua Spitz.

Cosmic ray shower simulations for a liquid scintillator neutrino experiment.

June 2018 – August 2018

Undergraduate Research Assistantship

Macalester College, advised by Dr. John Cannon.

Neutral gas dynamics in dwarf galaxies.

January 2018 – May 2018

NSF REU

Montana State University, advised by Dr. Jiong Qiu.

Imaging and analysis of magnetic reconnection in solar flares.

May 2017 – August 2017

Undergraduate Research Assistantship

Macalester College, advised by Dr. John Cannon.

Neutral gas dynamics in dwarf galaxies.

January 2017 – May 2017

Refereed Publications

- [2] “Delayed Stellar Mass Assembly in the Low Surface Brightness Dwarf Galaxy KDG215.”
Cannon, J. M., Shen, Z., McQuinn, K. B. W., Bartz, J., **Bralts-Kelly, L.**, *et al.*
Astrophysical Journal Letters, 2018, 864, L14. [arXiv:1808.07108](#)
- [1] “First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies.”
Bralts-Kelly, L., Bulatek, A. M., Chinski, S., *et al.*
Astrophysical Journal Letters, 2017, 848, L10. [arXiv:1709.10161](#)

Posters and Presentations

- [5] “Delayed Stellar Mass Assembly in the Low Surface Brightness Dwarf Galaxy KDG 215.”
Poster: **Bralts-Kelly, L.**, *et al.* 2019, 233rd Meeting of the American Astronomical Society.
- [4] “Simulating the Cosmic Ray Background for a Liquid Scintillator Neutrino Experiment.”
Poster: **Bralts-Kelly, L.**, Spitz, J., & Jordan, J. 2018, Macalester College Student Research Showcase.
- [3] “Modeling Cosmic Rays for a Liquid Scintillator Neutrino Experiment.”
Oral presentation: **Bralts-Kelly, L.** 2018, University of Michigan REU Symposium.
- [2] “Spatial and Spectral Evolution of Solar Flares in the HXRs and Ultraviolet.”
Poster: **Bralts-Kelly, L.**, & Qiu, J. 2017, Macalester College Student Research Showcase.

[1] “HXR Spatial and Spectral Evolution of Solar Flares.”

Oral presentation: **Bralts-Kelly, L.** 2017, Montana State University Solar Physics REU.

Teaching

Tutor , Department of Physics & Astronomy, <i>Macalester College</i>	September 2017 – present
Preceptor , PHYS 348: Laboratory Instrumentation, <i>Macalester College</i>	January 2019 – present
Preceptor , MATH 312: Differential Equations, <i>Macalester College</i>	January 2018 – May 2018
Preceptor , PHYS 113: Modern Astronomy I, <i>Macalester College</i>	January 2018 – May 2018
Grader , PHYS 227: Principles of Physics II, <i>Macalester College</i>	September 2017 – December 2017

Outreach and Leadership

Junior Class Representative , High Power Rocketry at Macalester	October 2018 – present
Assistant Chief Operator , WMCN 91.7 FM: Macalester College Radio	September 2018 – present
Coordinator , Macalester College Public Observing Nights	September 2018 – present
President , Macalester College Physics & Astronomy Club/SPS	September 2018 – present
Treasurer , Macalester College Physics & Astronomy Club	September 2017 – May 2018

Honors and Awards

La Serena School for Data Science Scholarship	2018
Dr. Russell B. Hastings Endowed Scholarship, <i>Macalester College</i>	2017 – 2019
Dewitt Wallace Distinguished Scholarship, <i>Macalester College</i>	2016 – 2019
National Merit Finalist Scholarship	2016 – 2019
Minnesota Space Grant Consortium Scholarship	2017 – 2018

Technical Skills

Proficient: IDL, \LaTeX

Working knowledge: Python, MATLAB, Mathematica, LabVIEW, C++,