

Lilly Bralts-Kelly

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🔗 lbraltsk.github.io

EDUCATION

Ph.D. Astronomy

2020 – present

University of Illinois, *Urbana-Champaign, IL*

B.A. Physics (Astronomy), Mathematics

2016 – 2020

Macalester College, *St. Paul, MN*

- ◇ Capstone: “HI Imaging and 3D Modeling of Candidate Local Group Dwarf Galaxies”
- ◇ GPA: 3.98/4.00, summa cum laude

RESEARCH

Summer Student, ASTRON, *Dwingeloo, Netherlands*

2019

- ◇ Conducted VLA HI imaging and 3D modeling of candidate Local Group galaxies
- ◇ Advisor: Betsey Adams

NSF REU Student, University of Michigan, *Ann Arbor, MI*

2018

- ◇ Simulated the effects of cosmic ray showers on an upcoming neutrino experiment
- ◇ Advisor: Joshua Spitz

Research Assistant, Macalester College, *St. Paul, MN*

2017 – 2018

- ◇ Imaged dwarf galaxies in HI to explore their kinematic properties
- ◇ Advisor: John Cannon

NSF REU Student, Montana State University, *Bozeman, MT*

2017

- ◇ Compared the spatial and spectral evolution of solar flares in the hard X-rays
- ◇ Advisor: Jiong Qiu

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.*
ApJL, 2018, 864, L14. [ADS:2018ApJ...864L...14C](#)
1. “First Characterization of the Neutral ISM in Two Local Volume Dwarf Galaxies.”
Bralts-Kelly, L., Bulatek, A. M., Chinski, S., *et al.* ApJL, 2017, 848, L10.
[ADS:2017ApJ...848L...10B](#)

PRESENTATIONS

9. "HI Imaging and 3D Modeling of Candidate Local Group Dwarf Galaxies."
Research talk, Macalester College Department of Physics and Astronomy, March 2020.
8. "ALFALFA Harvest: 3D Modeling of HI-Rich Candidate Local Group Dwarf Galaxies."
Poster, APS CUWiP at Minnesota, January 2020.
7. "ALFALFA Harvest: 3D Modeling of HI-Rich Candidate Local Group Dwarf Galaxies."
Poster, AAS 235, January 2020. Chambliss Award Honorable Mention.
6. "HI Imaging and Analysis of Candidate Satellite Dwarf Galaxies."
Research talk, ASTRON/JIVE AstroLunch, August 2019.
5. "Delayed Stellar Mass Assembly in the Low Surface Brightness Dwarf Galaxy KDG 215."
Poster, AAS 233, January 2019.
4. "Simulating the Cosmic Ray Background for a Liquid Scintillator Neutrino Experiment."
Poster, Macalester College Student Research Showcase, September 2018.
3. "Modeling Cosmic Rays for a Liquid Scintillator Neutrino Experiment."
Research talk, University of Michigan REU Symposium, August 2018.
2. "Spatial and Spectral Evolution of Solar Flares in the HXR's and Ultraviolet."
Poster, Macalester College Student Research Showcase, September 2017.
1. "HXR Spatial and Spectral Evolution of Solar Flares."
Research talk, Montana State University Solar Physics REU Symposium, August 2017.

TEACHING

Graduate Teaching Assistant

2020 – present

University of Illinois, *Urbana-Champaign, IL*

- ◇ ASTR 122: Stars and Galaxies (Fall 2020)

Grader/Preceptor

2017 – 2020

Macalester College, *St. Paul, MN*

- ◇ PHYS 440: Observational Astronomy (Spring 2020)
- ◇ PHYS 481: Quantum Mechanics (Fall 2019)
- ◇ PHYS 348: Laboratory Instrumentation (Spring 2019)
- ◇ MATH 312: Differential Equations (Spring 2018)
- ◇ PHYS 113: Modern Astronomy I (Spring 2018)
- ◇ PHYS 227: Principles of Physics II (Fall 2017)

Physics Tutor

2017 – 2020

Macalester College, *St. Paul, MN*

ACTIVITIES

Invited Panelist on Undergraduate Research Opportunities APS CUWiP at Minnesota, <i>Minneapolis, MN</i>	2020
Public Observing Nights Coordinator Macalester College Observatory, <i>St. Paul, MN</i>	2018 – 2019
President/Treasurer Macalester College Physics & Astronomy Club/SPS, <i>St. Paul, MN</i>	2017 – 2019
La Serena School for Data Science Student Associated Universities for Research in Astronomy, Inc., <i>La Serena, Chile</i>	2018

AWARDS

Dr. Sherman W. Schultz Memorial Award	2020
Chambliss Astronomy Student Award (Honorable Mention)	2020
Dr. Russell B. Hastings Endowed Scholarship	2017 – 2020
DeWitt Wallace Distinguished Scholarship	2016 – 2020
National Merit Scholarship	2016 – 2020
La Serena School for Data Science Travel Scholarship	2018
Minnesota Space Grant Consortium Scholarship	2017 – 2018