

Daisy Bissonette

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EDUCATION

University of Chicago in Chicago, IL (2023 –)
Ph.D. candidate in Astronomy and Astrophysics, expected May 2028.

Princeton University in Princeton, NJ (2019 – 2023)
A.B. degree with Honors in Astrophysical Sciences, May 2023.

SCIENTIFIC INTERESTS

Stellar populations, dwarf galaxies, and near-field cosmology

HONORS AND AWARDS

2023 *UChicago Astronomy & Astrophysics McCormick Fellowship*
2023 *Chambliss Astronomy Achievement Award Honorable Mention*
2022 *Princeton University Class of 1991 Foundation Scholarship*
2021 *Princeton Service Focus Winter Grant: Educational Equity*
2020 *John C. Bogle '51 Fellowship at Princeton University*
2020 *Scholars Institute Fellows Program (SIFP) Summer Math Fellowship*
2020 *Evergreen STEM Scholarship*

RESEARCH EXPERIENCE

Graduate Research Assistant at the University of Chicago, 2023 –
– Advised by Prof. Alexander Ji: Using stellar spectroscopy from the Low Resolution Imaging Spectrometer (LRIS) to constrain stellar metallicities in the dwarf galaxy Segue I. **Paper in prep**

Senior Thesis at Princeton University, 2022 – 2023
– Advised by Prof. Jenny Greene: Determined the initial mass function of a set of early-type galaxies using spectroscopy from the MASSIVE Survey and molecular gas observations from ALMA data.

International Internship Program (IIP) at Cardiff University, Summer 2022
– Advised by Dr. Timothy Davis: Determined the star formation efficiency for a sample of 13 galaxies using ALMA observations of CO(1-0) emission with results that further the ability to constrain dark matter distributions of these galaxies.

Junior Independent Research at Princeton University, 2021 – 2022
– *Undergraduate Summer Research Program (USRP)*: Advised by Prof. Elena Murchikova and Prof. Neta Bahcall: Analyzed spectral data from the Neutron Star Interior Composition Explorer (NICER) mission to measure x-ray variability at SgrA* during the S02 star flyby.

Research and Development Intern at NuMED For Children Inc., Summer 2020
– Worked directly with the Head of R&D on NuMED's international team to develop of a **new pediatric cardiac stent design that received FDA approval in December 2021.**

TALKS & POSTERS

Dwarf Galaxies II: Galactic Frontiers Conference, June 2025
Poster, Dartmouth College, Hanover, NH.

Small Galaxies, Cosmic Questions II, August 2024
Poster, Durham, UK.

First Stars VII Conference, May 2024
Flash Talk, New York, NY.

241st American Astronomical Society Meeting, January 2023
Poster, Seattle, WA.

2022 International Internship Program Research Symposium, August 2022
Poster, Princeton University.

Summer Star Formation Meeting, July 2022
Contributed Talk, Cardiff University.

Junior Paper Research Symposium, May 2022
Contributed Talk, Princeton University.

Conference of Undergraduate Women in Physics, January 2022
Virtual Poster, Rutgers University.

USRP Astrophysics Summer Research Symposium, August 2021
Contributed Talk, Princeton University.

TEACHING EXPERIENCE

Graduate Teaching Assistant at the University of Chicago: ASTR12600: Mass, Energy, Space, and Time, Fall 2023; ASTR12700: Galaxies, Winter 2024.

- Led laboratory sections focused on quantitative and problem-solving skills in physics, astronomy, and math topics
- Held weekly office hours, graded assignments and lab reports

Undergraduate Teaching Assistant at Princeton University: AST203: The Universe, Spring 2022.

- Invited by the department to assist with the introductory astronomy course
- Held weekly office hours and problem sessions, graded homework and exams
- Led monthly observing sessions for students

SERVICE AND OUTREACH

Lifelong Learning Talk at Chicago Public Library, November 2023

- Interactive lecture for senior citizens about the role of spectroscopy in astronomy at Chicago's Blackstone Public Library.

Community Engagement Working Group, UChicago Astrophysics, 2023 –

- Coordinate outreach activities, including the South Side Science Festival and the South Side Astronomy Art Contest.
- Further equity and diversity initiatives in the department by organizing speaker events, bias and microaggression workshops, and refining the department code of conduct.

PhET (Physics Education Technology) Simulations DEIB Advisory Board [🔗](#), 2022 – 2023

- Helping inform PhET's framework for equity and strategy plan for their DEIB in STEM Education Initiative at the University of Colorado at Boulder.

Conference of Undergraduate Women in Physics Local Organizing Committee, 2022 – 2023

- *Undergraduate Representative:* Recruited potential speakers, assisted with sources for funding, helped establish organizer training on topics such as accessibility and LGBTQ+ inclusivity.

Council of Science and Technology (CST) Student Advisory Board, 2021 – 2023

- Assisting with planning and outreach for CST Physical Sciences/Engineering events, working to advance STEM literacy at Princeton and beyond.