

ANNABELLE NIBLETT

Tucson, AZ · (612) 875-7024 · niblett@arizona.edu

LinkedIn: [linkedin.com/in/annabelleniblett](https://www.linkedin.com/in/annabelleniblett)

EDUCATION

University of Arizona, Tucson, AZ

August 2026-May 2031

Doctor of Philosophy (Anticipated in May 2031), Planetary Sciences, Minor in Astronomy

Dartmouth College, Hanover, NH

September 2022-June 2026

Bachelor of Arts, Double Major in Physics and Astronomy with High Honors

GPA 3.76/4.0

Minor in Women's, Gender, and Sexuality Studies

Activities and Societies: Student and Presidential Committee on Sexual Assault (*Executive Board*), Sexual Assault Peer Alliance (*Executive Board*), Physics and Astronomy Society (*President*), Kappa Delta Sorority, Dartmouth Forensic Union, Women in Science Project, Campus Tour Guides, Sexual Violence Prevention Project, Astronomy Teaching Assistant, Undergraduate Research, Neukom Scholars, Sigma Xi, Astronomy Foreign Study Program in Cape Town

PUBLICATIONS

Studying the Power Sources behind Type Ic Supernovae

Niblett, Annabelle E.; Fryer, Daniel A.; Fryer, Christopher L., *The Astrophysical Journal*, 2025,

<https://iopscience.iop.org/article/10.3847/1538-4357/ae1582>

A 16 Myr super-Neptune in Upper-Centaurus Lupus and a preliminary survey of transiting planets in Sco-Cen with TESS

Vach, Sydney et al., including Niblett, Annabelle E., *The Astronomical Journal*, 2025,

<https://iopscience.iop.org/article/10.3847/1538-3881/ade67f>

Observations of Five Southern-Hemisphere Cataclysmic Binary Stars

Thorstensen, John R.; Niblett, Annabelle E., et al., *The Astronomical Journal*, 2025,

<https://iopscience.iop.org/article/10.3847/1538-3881/ae201f>

EP250827b/SN 2025wkm: An X-ray Flash-Supernova Powered by a Central Engine and Circumstellar Interaction

Srinivasaragavan, Gokul P. et al., including Niblett, Annabelle E., accepted to the *Astrophysical Journal Letters*,

<https://arxiv.org/abs/2512.10239>

Lithium Depletion Boundary Ages for Three Young Stellar Populations Within 300 pc

Nelson, Jack M. et al., including Niblett, Annabelle E., in prep for submission to the *Astronomical Journal*

RESEARCH EXPERIENCE

Graduate Research Assistant with Professor Sukrit Ranjan

August 2026-Present

University of Arizona, Tucson, AZ

Undergraduate Research Assistant with Professor Elisabeth Newton

June 2023-June 2026

Dartmouth College, Hanover, NH

- Verified the existence of two exoplanets using the transit method.
- Utilized SALT data to determine the ages of target stars via lithium spectroscopy.
- Worked with existing Python packages to simulate exoplanetary atmospheres for a senior thesis with high departmental honors.

NASA JPL Summer Internship Program with Dr. Sam Halverson

June 2025-August 2025

NASA Jet Propulsion Laboratory, Pasadena, CA

- Used spectral data from Epsilon Eridani to determine the effect of stellar activity on exoplanet detection.
- Developed and presented results and data reduction pipelines for activity mitigation.
- Worked collaboratively with scientists at JPL and other institutions.

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Research Assistant in Theoretical Astrophysics with Dr. Chris Fryer

September 2024-December 2024

Los Alamos National Laboratory Center for Nonlinear Studies, Los Alamos, NM

- Modeled the trajectory and spectra of BL-Ic supernovae ejecta in Python and C++ using existing models as starting points.
- Compared created models to observational data to refine findings.
- Explored different power sources grounded in radiative transfer principles.

Women in Science Project Internship with Professor James LaBelle

January 2023-June 2023

Dartmouth College, Hanover, NH

- Examined unusual doublet structures in auroral radio emissions to determine their origin.
- Gathered, arranged, and corrected data to create representative graphs and charts highlighting results for presentations.
- Presented findings on a poster at the Wetterhahn Science Symposium.

TEACHING AND TUTORING

Astronomy Teaching Assistant

June 2024-August 2024, March 2026-June 2026

Dartmouth College, Hanover, NH

- Worked closely with professor and other TA to run labs, grade assignments, and proctor exams.
- Held office hours to provide individual and group instruction to students taking the class.
- Individually prepared by reviewing material and drawing on prior knowledge of course content.

Calculus Tutor

January 2023-March 2023

Dartmouth College, Hanover, NH

September 2023-November 2023

- Developed and maintained individualized skill-appropriate lesson plans.
- Supported students with helpful study habits and exam strategies.

GRANTS AND FELLOWSHIPS

National Science Foundation Graduate Research Fellowship

2026-2031

University of Arizona University Fellowship

2026

Competitive fellowship awarded to UA's highest-ranked incoming graduate students across all fields.

Neukom Scholar

Fall 2025

Computational research fellowship awarded by the Neukom Institute.

Dartmouth College URAD Scholar

Summer 2024, Spring 2024, Winter 2024, Fall 2023

Undergraduate Research Assistant.

Dartmouth Women in Science Project Internship

Spring 2023, Winter 2023

Undergraduate Research Assistant.

AWARDS

The Physics and Astronomy Faculty Prize in Memory of Francis W. Sears

2026

Awarded to a graduating senior for significant contributions to the Department and unusual achievement as an undergraduate and for the promise of continued commitment to the study of physics.

The Physics and Astronomy Chair's Teaching/Service Award

2025

The Chair's Teaching Award is given at the discretion of the Chair of Physics and Astronomy to a graduate student, and on occasion an undergraduate student, to recognize excellent instruction, excellent service to the physics department community, or both.

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PRESENTATIONS

Undergraduate Thesis Presentation for High Honors

May 2026

Hot Jupiter Atmospheres Through Time

Poster Presentation at the 247th American Astronomical Society Meeting

January 2026

Hot Jupiter Atmospheres Through Time

Dartmouth Astronomy Journal Club Presentation

October 2025

Extreme Precision Radial Velocity Exploration of Epsilon Eridani

JPL Summer Internship Final Presentation

August 2025

Extreme Precision Radial Velocity Exploration of Epsilon Eridani

Dartmouth Astronomy Journal Club Presentation

May 2025

Studying the Power Sources Behind Type Ic Supernovae

Poster Presentation at the Karen E. Wetterhahn Science Symposium

May 2023

Bifurcation structure in Auroral radio emissions

LEADERSHIP & OTHER RELEVANT EXPERIENCE

Physics and Astronomy Society Co-President

April 2023-September 2025

Dartmouth College, Hanover, NH

- Worked with co-president to restart the Physics and Astronomy Society at Dartmouth
- Coordinated student involvement in hiring of new plasma theorist faculty member.
- Organized community events for the Physics and Astronomy Department; Budgeted and handled flow of money from the Council on Student Organizations and the Physics Department; Created community for people in STEM while increasing interconnectedness between faculty and students.

Physics and Astronomy DEI Undergraduate Programming Coordinator

February 2024-August 2024

Dartmouth College, Hanover, NH

- Worked with Physics and Astronomy Department DEI committee to increase inclusion and participation of gender minorities in the department.
- Planned events to integrate undergraduates with faculty and staff.

SKILLS & CERTIFICATIONS

Computer: Python, Excel, IRAF, Mathematica, C++, Jupyter Notebooks

Technical Skills: Data Analysis