

Charlotte M. Wood | CV

225 Nieuwland Science Hall, University of Notre Dame, Notre Dame, IN 46556

✉ cwood12@nd.edu • 🌐 <https://charlottewood.me> • 🐦 astrocmwood

Education

University of Notre Dame

Ph.D. Physics

Notre Dame, IN

expected May 2022

“Connecting the Variations in Type Ia Supernovae to the Hubble Constant Tension”

Advisor: Dr. Peter Garnavich

Hofstra University

B.S. Physics, Minor in Astronomy

Hempstead, NY

May 2016

Magna Cum Laude, High Departmental Honors, Honors College Graduate with Distinction

Advisor: Dr. Stephen S. Lawrence

Publications

- *Benchmarking Substellar Evolutionary Models Using New Age Estimates for HD 4747 B and HD 19467 B*
C. M. Wood, T. Boyajian, K. von Braun, J. M. Brewer, J. R. Crepp, G. Schaefer, A. Adams, & T. R. White; *The Astrophysical Journal*, 873, 83 (doi:10.3847/1538-4357/aafe01; arXiv:1901.03687)
- *Infrared Surface Brightness Fluctuation Distances for MASSIVE and Ia Supernova Host Galaxies*
J. B. Jensen, J. P. Blakeslee, C.-P. Ma, P. A. Milne, P. J. Brown, M. Cantiello, P. M. Garnavich, J. E. Greene, J. R. Lucey, A. Phan, R. B. Tully, & C. M. Wood; *The Astrophysical Journal Supplement Series*, 255, 21 (doi:10.3847/1538-4365/ac01e7; arXiv:2105.08299)
- *Rapid Variability in the Wind from the White Dwarf Merger Candidate J005311*
P. Garnavich, C. Littlefield, R. Pogge, & C. M. Wood; *Research Notes of the American Astronomical Society*, 4, 167 (doi:10.3847/2515-5172/abbb8b; arXiv:2009.12380)
- *The TRENDS High-Contrast Imaging Survey. VIII. Compendium of Benchmark Objects*
E. J. Gonzales, J. R. Crepp, E. B. Bechter, C. M. Wood, J. A. Johnson, B. T. Montet, H. Isaacson, & A. W. Howard; *The Astrophysical Journal*, 893, 27 (doi: 10.3847/1538-4357/ab71fb; arXiv:2010.11866)
- *High-Time-Resolution Photometry of AR Scorpii: Confirmation of the White Dwarf's Spin-Down*
R. A. Stiller, C. Littlefield, P. Garnavich, C. M. Wood, F.-J. Hambsch, & G. Myers; *The Astronomical Journal*, 156, 150 (doi:10.3847/1538-3881/aad5dd; arXiv:1802.04323)

Invited Talks

- **Echoes of Silence: Probing Type Ia Supernova Environments with Scattered Light Echoes**
Seminar, Michiana Astronomical Society, Apr. 2021
Colloquium, Utah Valley University, Mar. 2021
Colloquium, University of Louisville, Feb. 2021
Seminar, University of Notre Dame, Oct. 2020
- **The Slowly Fading Light Echo Around Type Ia Supernova 2009ig**
Seminar, University of Notre Dame, Mar. 2019
- **Navigating Graduate School**
Seminar, Hofstra University, Mar. 2019

Conference Presentations

- **Rapid Variability in the Wind from the White Dwarf Merger Candidate J005311**
 - iPoster, 237th Meeting of the American Astronomical Society, Virtual, Jan. 2021
- **The Evolution of the Light Echo Around Type Ia Supernova 1998bu**
 - Poster, 235th Meeting of the American Astronomical Society, Honolulu, HI, Jan. 2020
- **The Slowly Fading Light Echo Around Type Ia Supernova 2009ig**
 - Poster, Midwest Workshop on Supernovae & Transients, Ohio State University, Sep. 2019
 - Talk, Midwest Workshop on Supernovae & Transients, University of Chicago, Feb. 2019
 - Poster, 233rd Meeting of the American Astronomical Society, Seattle, WA, Jan. 2019

Other Research Experience

Observing Experience

University of Notre Dame, Hofstra University

Remote observing at the W. M. Keck Observatory. Total of one 1/2 night on DEIMOS & one 1/2 night on LRIS.

Remote observing at the Large Binocular Telescope. Total of 35 nights using LBC, MODS, & LUCI.

Traditional observing at Cerro Tololo Interamerican Observatory. Total of 3 nights on the 0.8m SMARTS telescope.

The Origin of Metals in Extremely Low Mass White Dwarfs

University of Oklahoma

Research Experience for Undergraduates – Advisor: Dr. Mukremin Kilic

Looked for evidence of debris disks around extremely low mass white dwarfs as a source of calcium excess.

Various locations

Fall 2014 - present

Norman, OK

Summer 2015

Awards

Sigma Xi Grant in Aid of Research

University of Notre Dame

Fall 2019

Grant from Sigma Xi to pay for travel expenses to and from a research site, or for purchase of non-standard laboratory equipment necessary to complete a specific research project.

Arthur J. Schmitt Leadership Fellowship

University of Notre Dame

Spring 2016

This fellowship is awarded to the top 15 students in the ND Colleges of Science and Engineering each year.

Teaching Experience

Instructor for Scientific Writing for the REU

University of Notre Dame

Notre Dame, IN

Summer 2021

Designed & ran a shortened version of the Scientific Writing for Physicists course. Introduced the REU students to more planning & drafting tools, as well as talked to them about how to write a good scientific paper and how to make effective figures & tables.

Physics Teaching Practicum

University of Notre Dame

Notre Dame, IN

Fall 2018 - Spring 2020

Covered five lectures under observation of another instructor and created a teaching portfolio. Classes: Introduction to Astrophysics (3; undergraduate), Physics of Astrophysics (1; undergraduate/graduate), Scientific Writing (1; graduate)

Teaching Assistant for Physics Classes

University of Notre Dame

Notre Dame, IN

August 2016-present

Responsibilities include setting up lab equipment, grading, helping proctor exams, and organizing help sessions for students. Classes: Descriptive Astronomy (undergraduate), Lasers & Modern Optics (undergraduate), Physics of Astrophysics (graduate), Modern Observational Techniques (undergraduate/graduate).

Skills

Computer Languages/Programs: Python, IRAF/PyRAF, \LaTeX , Mathematica, MATLAB, IDL, Git.

Spoken Languages: English (native), Spanish (limited working proficiency), Italian (elementary).

Activities & Outreach

Graduate Physics Society & Association for Women in Science

Notre Dame, IN

University of Notre Dame

Summer 2018 - Spring 2021

Served as the astronomy group representative on the executive board for the physics graduate student organization from summer 2018 - spring 2020 and as the public relations chair from summer 2020 - spring 2021. Served as the physics department representative for AWIS from fall 2019 - spring 2020. Responsibilities included organizing, advertising, and running social & professional development events.

Public Observing Events

Notre Dame, IN

University of Notre Dame

Coordinated observing events for the public. Includes an observing event for high school summer camp students, two large general public observing events, a Mercury transit viewing, and an observing event for faculty and their families.

Science Demonstration Events

Notre Dame, IN

University of Notre Dame

Set up and ran demos for children. Includes running a session for Expanding Your Horizons (science workshops for middle school girls), staffing a booth at Science Alive (general science demos for the public), running a session for Art-2-Science (week-long science crafts camp for elementary & middle schoolers), setting up demos for an event celebrating the 50th anniversary of the Moon landing, and setting up demos for Our Universe Revealed (public lecture series).

Writing Tutor for the Warrior-Scholar Project

Notre Dame, IN

University of Notre Dame

July 2021

Helped the scholars navigate and adjust to reading & writing in a university environment. Provided guidance on written work and answered questions about the given prompt.

References

- **Dr. Peter Garnavich**
Professor of Physics, Department Chair
University of Notre Dame
Notre Dame, IN
- **Dr. Stephen S. Lawrence**
Professor of Physics and Astronomy
Hofstra University
Hempstead, NY
- Contact info:
Office: 228 Nieuwland Science Hall
Phone: (574) 631-3365
E-mail: pgarnavi@nd.edu
- Contact info:
Office: 217A Berliner Hall
Phone: (516) 463-5584
E-mail: stephen.s.lawrence@hofstra.edu