

# Charlotte M. Wood | CV

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## Education

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### University of Notre Dame

*Ph.D. Physics*

Advisor: Dr. Peter Garnavich

**Notre Dame, IN**

*2016-present*

### Hofstra University

*B.S. Physics, Minor in Astronomy*

High Departmental Honors – Advisor: Dr. Stephen S. Lawrence

Magna Cum Laude

Honors College Graduate with Distinction

**Hempstead, NY**

*2012-2016*

## Publications

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- **"Benchmarking Substellar Evolutionary Models Using New Age Estimates for HD 4747 B and HD 19467 B"**  
Accepted to The Astrophysical Journal, January 2019
- **"The TRENDS High-Contrast Imaging Survey. VIII. Compendium of Benchmark Objects"**  
In preparation, intended for The Astrophysical Journal (co-author)
- **"High-Time-Resolution Photometry of AR Scorpii: Confirmation of the White Dwarf's Spin-Down"**  
The Astronomical Journal, July 2018 (co-author)

## Talks and Presentations

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- **"The Slowly Fading Light Echo Around Type Ia Supernova 2009ig"**
  - Oral Presentation for the Midwest Workshop on Supernovae & Transients, University of Chicago, February 2019
  - Poster for the 233rd Meeting of the American Astronomical Society, Seattle, WA, January 2019
- **"Benchmarking Substellar Evolutionary Models Using New Age Estimates for HD 4747 B and HD 19467 B"**
  - Oral Presentation for the College of Science and Engineering Joint Annual Meeting, University of Notre Dame, December 2018
  - Poster for the AWIS Women in Science Regional Conference, University of Notre Dame, October 2018
- **"Precise Ages for the Benchmark Brown Dwarfs HD 19467 B and HD 4747 B"**  
Poster for the 231st Meeting of the American Astronomical Society, Washington D.C., January 2018
- **"The Origin of Metals in Extremely Low Mass White Dwarfs"**  
Poster for Undergraduate Research Day, Hofstra University, December 2015

## Other Research Experience

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### Observing Run at the Large Binocular Telescope

*University of Notre Dame*

**Tucson, AZ**

*Oct. 2018, Mar. 2019*

Remote observing from the University of Arizona for projects submitted by OSURC member institutions. Used MODS and LBC and dealt with mostly bad weather.

### **The Origin of Metals in Extremely Low Mass White Dwarfs**

*University of Oklahoma*

**Norman, OK**

*Summer 2015*

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.

### **Observing Run at Cerro Tololo Interamerican Observatory**

*Hofstra University*

**La Serena, Chile**

*Oct./Nov. 2014*

Advisor: Dr. Stephen S. Lawrence

Three full nights of observing using the 0.8m telescope at CTIO to study the light echoes of SN1987A.

### **Study of the Recurrent Nova T Pyxidis**

*Hofstra University*

**Hempstead, NY**

*2014-2015*

Advisor: Dr. Stephen S. Lawrence

Analyzed data from the Hubble Space Telescope to measure expansion of "knots" around T Pyxidis.

## **Awards**

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### **Arthur J. Schmitt Leadership Fellowship**

*University of Notre Dame*

*Spring 2016*

Awarded to the top 15 students in the Colleges of Science and Engineering each year.

### **Harold E. Clearman Memorial Award**

*Hofstra University*

*Spring 2015*

This scholarship is awarded to a student majoring in Physics who has achieved meritorious performance in coursework along with an outstanding individual research project.

## **Teaching Experience**

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### **Physics Teaching Practicum**

*University of Notre Dame*

**Notre Dame, IN**

*August 2018-present*

Covered three lectures (Physics of Astrophysics, Sept. 2018; Introduction to Astrophysics (2), Nov. 2018) under observation and created a teaching portfolio.

### **Teaching Assistant for Descriptive Astronomy**

*University of Notre Dame*

**Notre Dame, IN**

*Fall 2016, Fall 2017-present*

Responsibilities include running the observatory, organizing help sessions, helping proctor exams, helping rewrite observing projects, and grading for the non-science majors introductory astronomy class. Lead TA from Fall 2017-present.

### **Teaching Assistant for Physics of Astrophysics**

*University of Notre Dame*

**Notre Dame, IN**

*Fall 2018*

Responsibilities include grading and assisting with homework assignments and running an observing session for the introductory graduate student astrophysics class.

### **Teaching Assistant for Lasers and Modern Optics**

*University of Notre Dame*

**Notre Dame, IN**

*Spring 2017*

Responsibilities include setting up and testing labs, grading lab reports, and proctoring an exam for the junior/senior undergraduate optics class/lab.

### **Physics Tutor**

*Hofstra University*

**Hempstead, NY**

*September 2014-December 2015*

Tutored non-physics majors for both calculus and non-calculus based introductory physics courses.

### **Peer Teacher for ASTR 011 – The Solar System**

*Hofstra University*

**Hempstead, NY**

*Spring 2015*

Assisted Dr. Stephen S. Lawrence in conducting lab activities for an introductory astronomy class.

## Skills

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**Computer Languages/Programs:** Python, IRAF/PyRAF,  $\text{\LaTeX}$ , Mathematica, MATLAB, IDL, Git.

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

## Activities & Outreach

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### Graduate Physics Society Executive Board

*University of Notre Dame*

**Notre Dame, IN**

*Summer 2018 - Present*

Serving as the astronomy group representative on the executive board for the physics graduate student organization. E-board acts as a bridge between the graduate students and the department and helps organize all GPS events.

### Science Alive

*University of Notre Dame*

**Notre Dame, IN**

*February 2019*

Helped with interactive demonstrations that teach physics & astronomy to children in the local community.

### Summertime Stargazing

*University of Notre Dame*

**Notre Dame, IN**

*July/August 2018*

Assisted with a large public observing event, manned a telescope and helped answer the public's questions about what they were seeing.

### Observing for Physics of Atomic Nuclei Students

*University of Notre Dame*

**Notre Dame, IN**

*June 2018*

Held an observing night for high school students attending the Physics of Atomic Nuclei camp.

### Expanding Your Horizons

*University of Notre Dame*

**Notre Dame, IN**

*April 2018*

Ran a workshop teaching middle school girls about exoplanets and helped them craft their own paper-mache exoplanets.

## Professional Organizations

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### o American Astronomical Society

AAS is the major organization of professional astronomers in North America. Their mission is to enhance and share humanity's scientific understanding of the universe.

### o Phi Beta Kappa

$\Phi\text{BK}$  aims to promote and advocate excellence in the liberal arts and sciences and to induct the most outstanding students of arts and sciences at American colleges and universities.

### o Sigma Pi Sigma

$\Sigma\Pi\Sigma$  exists to honor outstanding scholarship in physics and to provide a fellowship of persons who have excelled in physics.

## References

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### o Dr. Peter Garnavich

Professor of Physics, Department Chair  
University of Notre Dame  
Notre Dame, IN

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### o Dr. Stephen S. Lawrence

Professor of Physics and Astronomy  
Hofstra University  
Hempstead, NY

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Office: 217A Berliner Hall  
Phone: (516) 463-5584  
E-mail: stephen.s.lawrence@hofstra.edu

- **Dr. Mukremin Kilic**

Assistant Professor of Physics and Astronomy  
University of Oklahoma  
Norman, OK

- Contact info:

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