

# CHARITY WOODRUM

Department of Astronomy, Steward Observatory  
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## EDUCATION

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<b>University of Arizona</b> Ph. D. in Astronomy & Astrophysics M. S. in Astronomy & Astrophysics	Tucson, AZ <i>May 2023 (expected)</i> <i>May 2020 (expected)</i>
<b>University of Oregon</b> B. S. in Physics <i>Departmental Honors</i>	Eugene, OR <i>June 2018</i>
<b>Umpqua Community College</b> A. A. S. in Nursing (RN)	Roseburg, OR <i>June 2009</i>

## SCIENTIFIC WORK EXPERIENCE

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University of Arizona <b>Ph. D. Graduate Research Assistant</b>	Tucson, AZ <i>08/2018-present</i>
University of Oregon <b>Fishergroup Lead Student Researcher</b>	Eugene, OR <i>03/2015-06/2018</i>
Pine Mountain Observatory <b>Lead Student Researcher</b>	Bend, OR <i>05/2014-06/2018</i>
Marshall Space Flight Center <b>NASA Research Intern</b>	Huntsville, AL <i>06/2016-08/2018</i>
University of Oregon <b>Physics Demonstrator Room Assistant</b>	Eugene, OR <i>04/2015-06/2016</i>

## REFEREED PUBLICATIONS

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1. *The Evolution of Bulge-dominated Field Galaxies from  $z \approx 1$  to the Present*  
**Woodrum, C.**, Jørgensen, I., Fisher, R.S., et al., 2017, ApJ, 847, 20
2. *The Gemini/Hubble Space Telescope Galaxy Cluster Project: Stellar Populations in the Low-redshift Reference Cluster Galaxies*  
Jørgensen, I., Chiboucas, K., Webb, K., **Woodrum, C.**, 2018, AJ, 156, 224

## GRANTS AND AWARDS

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- 2018: National Science Foundation Graduate Research Fellowship
- 2018: University of Oregon, Department of Physics Weiser Undergraduate Research Award
- 2017: Osher Scholar
- 2016: NASA Undergraduate Research Fellowship
- 2016: University of Oregon, Department of Physics Weiser Undergraduate Research Award

## TEACHING EXPERIENCE

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- **Undergraduate Teaching Assistant** PHYS 201, 202, 203: Introduction to Physics, Summer 2015, University of Oregon
- **Science Educator** Astronomy for Preschoolers, Summer 2015, Moss Street Children's Center

## INVITED PRESENTATIONS

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- *My STEM Story: From Canyonville, OR to NASA*  
Keynote Speaker for the Women in Science and Engineering Symposium, Churchill High School, Eugene, OR, March 2018
- *My Research Story: From Pine Mountain to Hubble*  
Pine Mountain Observatory Research Exposition, Portland, OR, December 2017
- *Nature vs. Nurture: What Drives Galaxy Evolution?*  
Oregon NASA Space Grant Consortium research symposium, Oregon State University, Corvallis, OR, November 2017
- *Nature vs. Nurture: What Drives Galaxy Evolution?*  
Undergraduate Research Symposium, University of Oregon, Eugene, OR, May 2017
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
Women in Science and Engineering Club, Churchill High School, December 2016
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
Society of Physics Students meeting, University of Oregon, Eugene, OR, November 2016
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
Oregon NASA Space Grant Consortium research symposium, Oregon State University, Corvallis, OR, November 2016
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
X-ray Astronomy Group, NASA Marshall Space Flight Center Astrophysics Office, Huntsville, Alabama, August 2016
- *Optimizing the Search Algorithm for the Fermi GBM Data*  
Fermi GBM Group, NASA Marshall Space Flight Center Astrophysics Office, Huntsville, Alabama, July 2016
- *Life in Low Density Environments - Field Galaxies from Half the Age of the Universe to the Present*  
Society of Physics Students meeting, University of Oregon, Eugene, OR, May 2016

## POSTER PRESENTATIONS

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- *Evolution in Solitude - Field Galaxies from Half the Age of the Universe to the Present*  
Oregon NASA Space Grant Consortium Student Symposium, Oregon State University, Corvallis, OR, November 2017
- *Evolution in Solitude - Field Galaxies from Half the Age of the Universe to the Present*  
American Astronomical Society's 229th meeting, Grapevine, TX, January 2017
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
Oregon NASA Space Grant Consortium Student Symposium, Oregon State University, Corvallis, OR, November 2016
- *Searching for the Electromagnetic Counterpart to Gravitational Wave Events*  
Intern Poster Presentation, NASA's Marshall Space Flight Center, Huntsville, AL, August 2016
- *Life in Low Density Environments - Field Galaxies from  $z=1.0$  to the Present*  
Undergraduate Research Poster Session, University of Oregon, Eugene, OR, October 2015
- *Life in Low Density Environments - Field Galaxies from  $z=1.0$  to the Present*  
International Astronomical Union XXIX, Honolulu, HI, August 2015

## PROFESSIONAL AFFILIATIONS

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- 2016-present: American Astronomical Society
- 2016-present: American Physical Society

## PRESS

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- *Stellar Student: Charity Woodrum rides a NASA internship to the forefront of astrophysics*  
by Jim Murez, cover of Cascade Magazine, Fall 2016
- *Cosmic Connections*  
by Matt Cooper, Cascade Magazine, Fall 2016
- *Wow at Pine Mountain: UO students zoom in on a dying star*  
Around the O, June 2016
- *Star pupil*  
by Tricia Jones, Douglas County Partners for Student Success, January 2017
- *A dozen UO students receive prestigious NSF graduate research fellowships*  
Around the O, May 2018

## TECHNICAL PROFICIENCIES

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- Programming languages (Python, R)
- Specialized software (LaTeX, AASTex, IRAF)
- Telescope operation (manual and computerized)
- Science outreach to all audiences: Public, K-12, undergraduate, and scientific