
KATIE CHAMBERLAIN she/her

933 N. Cherry Avenue, Tucson, AZ 85721
email: katiechambe@email.arizona.edu
website: katiechambe.github.io

EDUCATION *Ph.D., Astronomy and Astrophysics* May 2023 (Expected)
 M.S., Astronomy and Astrophysics May 2020 (Expected)
 Steward Observatory, University of Arizona, Tucson, AZ
 Advisor: Gurtina Besla

B.S., Physics May 2018
 Secondary Major: Mathematics
 Montana State University, Bozeman, MT
 Advisor: Nicolas Yunes

RESEARCH INTERESTS Dwarf Galaxies
 - Frequency of isolated pairs and satellites
 - Orbital and internal dynamics of interacting pairs
 - Hydrodynamic and cosmological simulations

PUBLICATIONS *Frequency-domain waveform approximants capturing Doppler shifts*
 K. Chamberlain, C. Moore, D. Gerosa, N. Yunes
 Phys. Rev. D **99**, 024025 (2019)

 Theoretical Physics Implications of Gravitational Wave Observation with Future Detectors
 K. Chamberlain, N. Yunes
 Phys. Rev. D **96**, 084039 (2017)

 Theory-Agnostic Constraints on Black-Hole Dipole Radiation with Multi-Band Gravitational-Wave Astrophysics
 E. Barausse, N. Yunes, **K. Chamberlain**
 Physical Review Letters **116**, 241104 (2016)

RESEARCH EXPERIENCE *Graduate Research Assistant*
 Steward Observatory, University of Arizona 2018 - Present
 Advisor: Gurtina Besla

LIGO Summer Undergraduate Research Fellowship (REU)
 California Institute of Technology TAPIR Group Summer 2017

Undergraduate Research Assistant
 Montana State University - eXtreme Gravity Institute 2015 - 2018
 Advisor: Nicolas Yunes

Research Apprentice
 Montana Space Grant Consortium 2016 - 2017

COMPUTATIONAL SKILLS *Proficient:* Python, Mathematica, LaTeX, HPC, HTML, git.
Some experience: Java, MATLAB, bash.

HONORS, AWARDS & GRANTS

MONTANA STATE UNIVERSITY	
<i>Undergraduate Scholars Program Grant</i>	2015 - 2018
<i>Research Travel Grants</i>	2017, 2018
<i>Montana University System Honors Scholarship</i>	2013 - 2017
MONTANA STATE UNIVERSITY PHYSICS DEPARTMENT	
<i>Outstanding Graduating Senior in Physics</i>	2018
<i>Outstanding Undergraduate Physics Researcher Award</i>	2017 - 2018
<i>Georgianne Caughlan Scholarship for Women in Physics</i>	2017 - 2018
<i>John and Marilyn (Milburn) Asbridge Family Physics Scholarship</i>	2015 - 2017
MONTANA STATE UNIVERSITY MATHEMATICS DEPARTMENT	
<i>Outstanding Graduating Senior in Math</i>	2018
<i>John L Margaret Mathematics and Science Scholarship</i>	2017 - 2018
<i>Mathematics Department Scholarship for Excellence in Coursework</i>	2014 - 2015
OTHER	
American Physical Society Division of Gravitation Travel Award	2018

TALKS[†] & POSTERS^{*}

**Frequency of dwarf galaxy pairs throughout cosmic time.*
 Small Galaxies, Cosmic Questions Meeting.
 Durham, UK, July 2019

†Towards a “Kicked” Frequency-Domain Waveform Approximant.
 APS April Meeting.
 Columbus, Ohio, April 2018

†Testing Modified Gravity with Future Gravitational Wave Detectors.
 Pacific Coast Gravity Meeting.
 California Institute of Technology, March 2018

†Measuring Black Hole Kicks with Future Gravitational Wave Detectors.
 LIGO-Caltech Summer Research Celebration.
 California Institute of Technology, August 2017

**Theoretical Physics Implications with Future Gravitational Wave Detectors.*
 Poster Presentation at Montana Space Grant Consortium Research Celebration.
 Bozeman, MT, May 2017

**Theoretical Physics Implications with Future Gravitational Wave Detectors.*
 Poster Presentation at Undergraduate Research Celebration.
 Montana State University, April 2017

†Gravitational Wave Tests of General Relativity with Future Detectors.
 APS April Meeting.
 Washington D.C., January 2017

†Constraints on Modified Gravity with Future Gravitational Wave Detectors.

Relativity and Astrophysics Seminar.
Montana State University, October 2016

** Theoretical Physics with Multi-Band Gravitational Wave Astrophysics.*
Poster Presentation at Undergraduate Research Celebration
Montana State University, April 2016

PRESS	<i>“Looking for nothing to test gravity”</i> Interview with Symmetry Magazine	2018
OUTREACH & SERVICE	<i>Member</i> Steward Graduate Student Council University of Arizona Acting liaison between faculty and graduate students, responsible for graduate student townhalls to discuss state of the graduate program.	2019 - Present
	<i>Volunteer</i> Warrior-Scholar Project University of Arizona Taught students an introduction to programming in Python, led a Jupyter Notebook-based exoplanet research project, and provided tutoring help during students’ homework sessions.	2019
	<i>Founder</i> Society of Physics Students <i>Coding Nights</i> Montana State University Teaching basic coding courses in Mathematica and LaTeX to early undergraduate physics students.	2016 - 2018
	<i>Society of Physics Students</i> Montana State University	2013 - 2018
	- President	2016 - 2017
	- Vice President	2015 - 2016
	- Student Representative	2017 - 2018
MEMBERSHIPS	- TiNy Titans (TNT) Collaboration	2018 - Present
	- American Astronomical Society	2018 - Present
	- LIGO Scientific Collaboration	2017
	- American Physical Society	2016 - 2019
	- eXtreme Gravity Institute at Montana State University	2015 - 2018