

JACQUELINE GOLDSTEIN

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EDUCATION

Ph.D. Astronomy, University of Wisconsin–Madison	Expected 2020
M.S. Astronomy, University of Wisconsin–Madison	2016
B.S. Astrophysics (Honors), University of California Santa Cruz <i>Chancellor’s Award for Senior Thesis</i>	2014
Physics (Honors), City College of San Francisco	2014

SELECTED RESEARCH EXPERIENCE

Graduate Research Assistant 2014 - 2018

Advisors: Profs. R. Townsend and E. Zweibel, University of Wisconsin–Madison

- Developing and applying the ‘contour method’ - a new method in the stellar pulsation code GYRE for calculating the non-adiabatic pulsation frequencies of stars [4.]
- Modified and used GYRE to validate a new anelastic instability criterion for MHD models subject to the Tayler instability [3.]
- Used GYRE and calibrating observational data to show that internal gravity waves are an efficient mechanism of angular momentum transport in slowly pulsating B stars [2.]

Undergraduate Research Assistant 2011 - 2014

Advisors: Prof. E. Ramirez-Ruiz, M. MacLeod, University of California Santa Cruz

- Developed and applied a numerical tidal dissipation code to explore the orbital parameter space of white dwarfs orbiting intermediate-mass black holes [1.]

REFEREED PUBLICATIONS

[4.] **Goldstein, J.**, Townsend, R. D. 2018 (in prep)

A New Method for Calculating Non-Adiabatic Pulsation Frequencies

[3.] **Goldstein, J.**, Townsend, R. D., Zweibel, E. G 2018, ApJ (submitted)

The Tayler Instability in the Anelastic Approximation

[2.] Townsend, R. D., **Goldstein, J.**, Zweibel, E. G 2018, MNRAS, 475,879

Angular Momentum Transport by Heat-Driven g-modes in Slowly Pulsating B Stars

[1.] MacLeod M., **Goldstein, J.**, Ramirez-Ruiz, E., Guillochon, J., Samsing, J. 2014, ApJ, 794,14

Illuminating Massive Black Holes with White Dwarfs: Orbital Dynamics and High-energy Transients from Tidal Interactions

SELECTED GRANTS AND SCHOLARSHIPS

NSF Graduate Research Fellowship (Honorable Mention) 2016

California Space Grant Consortium 2013

UC Regents Scholarship 2012

NSF Supernova Fellow, University of California Santa Cruz 2011-2014

SELECTED POSTERS AND PRESENTATIONS

Awarded Best Scientific Poster

- Enabling Non-adiabatic Asteroseismology with TESS 2018
Poster - TASC4/KASC11 - First Light in a New Era of Astrophysics, Aarhus University
- Angular Momentum Transport by Heat-Driven g-modes in Slowly Pulsating B Stars 2017
Presentation - Mysteries and Inner Workings of Massive Stars, Kavli Institute for Theoretical Physics
- The Tayler Instability in the Anelastic Approximation 2017
Poster - Mysteries and Inner Workings of Massive Stars, Kavli Institute for Theoretical Physics
- Tidal Disruption of White Dwarfs by Intermediate-mass Black Holes 2013
Presentation - City College of San Francisco

SELECTED PROFESSIONAL EXPERIENCE

- Teaching Assistant 2017
The Evolving Universe, University of Wisconsin–Madison
- Teaching Assistant 2017
Modules for Experiments in Stellar Astrophysics (MESA) Summer School, UC Santa Barbara
- Lecture Assistant 2015-2017
Stellar Astrophysics, University of Wisconsin–Madison
- Physics Tutor 2012-2014
University of California Santa Cruz
- Physics Tutor 2009-2011
Physics Department, City College of San Francisco
- Math Tutor 2009-2011
Learning Assistance Center, City College of San Francisco
- Astronomy Tutor 2006-2011
Astronomy Department, City College of San Francisco

SELECTED OUTREACH EXPERIENCE

- Gaining STEAM Scientist 2018
JXK Comics: communicating research through comics
- 3-Minute Research Talk 2018
Wisconsin Science Festival: Science on the Square
- Wisconsin Story Works Fellow 2018
Wisconsin Story Works: teaching science communication through Story
- Astronomy Graduate Lectures for Undergraduates (AstroGLU) 2015-2018
Creator and Organizer
- Radio Astronomy Co-host 2015-2017
WORT 89.9FM