S. Reece Boston

Astrophysicist

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Ph.D., Physics, University of North Carolina, 2021

Thesis: Relativistic Pulsations and Tidal Excitations of White Dwarfs

M.S., Physics, University of Georgia, 2015

B.S., Mathematics and Physics, Georgia College, 2010

Technology Summary

GitHub: rboston628

- C++
- SQL
- LaTeX
- R
- python
- Bayesian Monte Carlo

Research Experience

Research Assistant Fall 2016 - Present

Department of Physics and Astronomy, University of North Carolina - Chapel Hill

Research Advisor: Charles R. Evans

Topic: The numerical calculation of pulsation frequencies for white dwarf and other stellar objects in classical and general relativistic settings, performed in C++ with GNU/UNIX.

Research Assistant Fall 2011 - Spring 2015

Department of Physics and Astronomy, University of Georgia

Research Advisors: Steven P. Lewis and William Dennis

Topic: Simulated propagation of light inside metamaterials using FDTD methods with C++. Multi-core projects with MPI on university Linux supercluster.

Published Work

- Boston, S. Reece, J. C. Clemens, "Classification of DAVs by Helium Layer Mass." MNRAS, (2021) [In Draft].
- Boston, S. Reece, J. C. Clemens, and Charles R. Evans, "The Relativistic Correction to White Dwarf Periods." MNRAS, (2021) [In Draft].
- Boston, S. Reece, Bart H. Dunlap, J. C. Clemens, and Charles R. Evans, "The Limits of Newtonian White Dwarf Asteroseismology." Physical Review D, (2021) [Awaiting Submission].
- de Souza, Rafael, S. Reece Boston, Alain Coc, and Christian Iliadis, "Thermonuclear fusion rates for tritium+deuterium using Bayesian methods." Physical Review C, (2018).
- Boston, S. Reece, "Time Travel in Transformation Optics." Physical Review D, (2015).