



PHYSICS AND ASTRONOMY SEMINAR

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“How wavy are stars?”

Abstract

“Recent advances in time-domain astronomy and space-based photometry methods are revolutionizing stellar astrophysics. Observations of luminous supernova, and observations by CoRoT, Kepler, and now TESS have lead to a variety of new questions about stellar structure and evolution, including: How is angular momentum distributed within stars? What powers superluminous supernovae? What sets the chemical structure of stars’ radiative zones? Surprisingly, the answer to each of these questions may be related to waves. It is difficult to describe the effects of waves on stellar evolution, as wave periods and wavelengths are often much shorter than the evolution time and global scale of a star. However, I will present recent work on the generation and nonlinear effects of waves, based both on idealized numerical simulations and analytic calculations. These suggest waves are essential for understanding the evolution of stars.”

Tuesday, November 19, 2019

3:00 p.m.

ELL Building – Room 062