PHYSICS AND ASTRONOMY SEMINAR

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"What can asteroseismology do for astrophysics?"

Asteroseismology, the study of stellar oscillations, has emerged as the best way to characterize the global properties of stars, such as their mass, radius and age. Beyond being interesting in their own right, these measurements are essential for a variety of endeavours throughout astrophysics, such as exoplanetology and galactic archaeology. For the very best-observed stars, it is possible to additionally measure some aspects of the internal stellar structure, such as the density and sound speed profile throughout the stellar core. These measurements provide the exciting opportunity to test the physics of stellar evolution, as different physics assumed in stellar evolution simulations may result in the same global properties of stars but a different internal stellar structure. These asteroseismic tests can range from assessing proposed mixing mechanisms in stellar interiors, to measuring cosmological effects such as a time-variable gravitational constant. In this seminar, I will give an accessible review of asteroseismology, and highlight the progress that is being made toward mapping out the interior structures of stars.

Monday, April 12, 2021

2:00 p.m.

Zoom link:

https://uvic.zoom.us/j/82203756592