

Kent State University

Physics Colloquium

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UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

**NEUTRON STAR INTERIORS:
MATTER UNDER EXTREME CONDITIONS**

Abstract

While neutron stars were first posited in the early thirties, and discovered as pulsars in late sixties, it is only recently that we are beginning to understand the matter they contain. In this talk I will describe the continuing development of a consistent picture of the liquid interiors of neutron stars, driven by three recent advances: observations of heavy neutron stars with masses ~ 2.0 solar masses; determinations of masses and radii simultaneously for an increasing number of neutron stars; and an emerging understanding in QCD of how nuclear matter can turn into deconfined quark matter in the interior.

THURSDAY, NOVEMBER 5, 2015

1:30 PM

SMITH HALL 111

REFRESHMENTS: 1:15 PM – SMITH HALL LOBBY