PHYSICS AND ASTRONOMY
COLLOQUIUM

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"Neutron Stars in the Multi-Messenger Era"

Abstract

Properties of ultra-dense, compact quantum objects called neutron stars have largely remained in the realm of theoretical speculation since their discovery about 60 years ago. Advances in theory and simulation, and new insights from observations and experiment are now beginning to reveal how these properties shape and correlate different observable phenomena such as x-ray and gamma-ray bursts, core-collapse supernovae and neutron star mergers. I will discuss these developments and efforts to interpret the electromagnetic, neutrino, gravitational wave, and nucleosynthetic signatures of these most violent astrophysical phenomena. As theory and simulations confront multi-messenger observations we may be able to address some long-standing questions about the nature of matter at extreme density and its role in shaping the cosmos.

Wednesday, February 22, 2017
3:00 p.m.
Elliott Building
Room 167