PHYSICS AND ASTRONOMY
SEMINAR

Dr. Matthias Kaminski

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"Anomalous Hydrodynamics Kicks Neutron Stars"

Abstract

Observations show that, at the beginning of their existence, neutron stars are accelerated briskly to velocities of up to 1000 km/s.

We will discuss possible mechanisms contributing to these kicks in a systematic effective-field-theory framework. Anomalies of the underlying microscopic theory result in chiral transport terms in the hydrodynamic description, and we will identify these as explanation for the drastic acceleration. I will introduce the relevant concepts and present the results in form of a blackboard talk.

Friday, November 7, 2014
2:30 p.m.
Elliott Building
Room 160