LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS

LEPP Joint Seminar

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Tel Aviv

Comagnetometers as a Probe to New Physics

The noble-alkali comagnetometer, developed in recent years, has been shown to be a very accurate measuring device of anomalous magnetic-like fields. An ultra-light relic axion-like particle can source such an anomalous field, allowing for its detection by such comagnetometers. In this talk I will explain how comagnetometers work, and show the new constraints on relic axion-like particles from old comagnetometer data. These constraints are the best of any terrestrial probe over a range of masses. Future experiments which we are currently building could reach unrivaled sensitivity in the ultra-low mass regime.

Friday, Feb. 15, 2019

1pm

401 Physical Sciences Bldg.

LEPP and CHESS resources have merged and a new lab, (CLASSE), has formed. LEPP's primary source of support is the National Science Foundation. Visit us at www.lepp.cornell.edu