

UCLA Department of Physics & Astronomy

COLLOQUIUM

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PAB 1-434

Open questions in Neutrino Physics

Wick Haxton
U.C. Berkeley



I will review what we have learned about the neutrino from astrophysics and from laboratory experiments, and discuss a few of the remaining open questions. Neutrinos control the transport of energy and lepton number in core-collapse supernovae and neutron star mergers, yet our understanding of neutrinos in such high-density environments is limited. Similarly, neutrino mass is potentially relevant to the pattern of the fermions, dark matter, and baryogenesis, though we have not identified the mechanism responsible for that mass. I will describe some of the ongoing work aimed at resolving such questions.