Kendall Mahn – Colloquium 11/14/2019 MSU

Title: Neutrinos

Neutrino oscillation, that is, the conversion of one type of neutrino to another, is a surprising phenomenon under active study. The origin of neutrino mass is important for astrophysics, cosmology and particle physics, and many open questions surrounding neutrino oscillation exist. The Tokai-to-Kamioka (T2K) neutrino oscillation experiment sends a beam of muon flavor neutrinos or antineutrinos 295km across Japan. This colloquium will discuss the state of the field of neutrino oscillation physics, recent results from T2K, and the bright future and capabilities of future accelerator based neutrino experiments.