Abstract for an Invited Paper for the PSF09 Meeting of The American Physical Society

Understanding Neutrino Mass and Mixing with Low-Energy Experiments

KARSTEN M. HEEGER, University of Wisconsin

Neutrino mass and mixing are amongst the major discoveries of recent years and demand that we make the first significant revision of the Standard Model in decades. Many important questions remain: Are neutrinos their own antiparticles? What is their mass scale? Can neutrinos explain the observed baryon asymmetry in the Universe? I will review the discoveries of recent non-accelerator experiments and discuss the prospects for understanding the nature of neutrino mass with the bolometric CUORE experiment and the search for the last unknown neutrino mixing angle θ_{13} with the Daya Bay reactor experiment.