

Probing Neutrino Masses and Mixings with Accelerator (and Reactor) Neutrinos

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It is now well established that neutrinos have mass and that there is mixing among the different neutrino types. This has led to many questions with respect to the properties of neutrinos, including why are the masses so small, are there more than three types such as additional sterile neutrino types, are there CP violations associated with neutrino oscillations, and are the neutrinos Dirac or Majorana particles?

In this talk, I will present the status and plans for exploring some of these questions using accelerator (and reactor) neutrinos. With respect to oscillations among the three standard neutrinos, the current program for measuring the third mixing angle, θ_{13} , will be presented, along with future plans for using long baseline experiments to search for CP violation and the mass hierarchy. Finally, the status of possible oscillations to sterile neutrinos will be described including the results from LSND, MiniBooNE and the recent reanalysis of reactor oscillation data.

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