

6th International Workshop on Neutrino-Nucleus Interactions in the
Few-GeV Region (NUINT 09)

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Type: Talk

Short Baseline Neutrino Physics - OscSNS, the BNB, and Beyond

Thursday, May 21, 2009 9:00 AM (20 minutes)

This talk will explore the impact of future short baseline experiments at the SNS and the Booster Neutrino Beam (BNB). The Spallation Neutrino Source (SNS), located at the Oak Ridge National Laboratory site near Knoxville, TN, USA, will eventually provide roughly 1.3 MW of proton beam power on a liquid mercury target. The extremely intense beam of neutrinos, largely produced by pions and muons which decay at rest, has a neutrino spectra that is precisely known. The beam's time structure will separate the monochromatic, 30 MeV, pion decay-at-rest neutrinos and allow the C12(1511) state to be cleanly measured. The OscSNS experiment would be sensitive to a host of short-baseline oscillation effects. Further measurements in the BNB could provide a resolution to the exciting low energy excess found by MiniBooNE in neutrino mode.

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