

Abstract Submitted  
for the HAW14 Meeting of  
The American Physical Society

**MicroBooNE** THOMAS STRAUSS, University Bern, Albert Einstein Center, LHEP, MICROBOONE COLLABORATION — The MicroBooNE experiment is a neutrino detector located on the Fermilab Booster Neutrino Beamline. The experiment will use a liquid argon time projection chamber (LArTPC) to investigate the nature of the yet unexplained event excess observed by the MiniBooNE collaboration at low reconstructed neutrino energies. LArTPC's allow a detailed study of the energy deposition in showers and thus MicroBooNE will be able to distinguish if the excess is due to single electrons from electron neutrinos or caused by an electron-positron pair created in a gamma conversion from the prominent neutral pion background. The fine-grained tracking capabilities and calorimetric range of the detector will also allow neutrino cross section measurements at  $\sim 1\text{GeV}$  in liquid argon, as well as a probe of final-state interactions and other nuclear effects in neutrino interactions in argon with high precision. The TPC has a volume of about 80 tons, and is currently in the final commissioning stages. This talk will present the detector design, construction, the calibration methods used and the current status of the experiment.

Thomas Strauss  
University Bern, Albert Einstein Center, LHEP

Date submitted: 27 Jun 2014

Electronic form version 1.4