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### **The Long-Baseline Neutrino Experiment (LBNE)**

ROBERT WILSON<sup>1</sup>, Colorado State University

I will report on the status of the Long-Baseline Neutrino Experiment (LBNE), which is a broad scientific program being developed in the United States as an international partnership. LBNE is proposed as an intense neutrino beam produced at Fermi National Accelerator Laboratory (Fermilab), a highly capable set of neutrino detectors on the Fermilab campus, and a large underground liquid argon time projection chamber at Sanford Underground Research Facility (SURF) in South Dakota. The high-intensity neutrino beam will allow LBNE to make high precision measurements of neutrino and anti-neutrino mixing separately. LBNE will make detailed studies of neutrino oscillations including measurements of the mass hierarchy and CP violation that take advantage of the 1300 km baseline. At the near site, the high-statistics neutrino scattering data will allow for many cross-section measurements and precision tests of the Standard Model. At the far site, the large underground detector will also open a new window to the search for nucleon decay, supernova neutrinos, and other astrophysical phenomena.

<sup>1</sup>With the LBNE Collaboration.