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## The Long Baseline Neutrino Experiment

The Long-Baseline Neutrino Experiment (LBNE) collaboration plans a comprehensive experiment that will fully characterize neutrino oscillation phenomenology using a high intensity 1300 km baseline accelerator neutrino beam and an advanced liquid argon TPC as the far detector. The goals for this program are well recognized to be the determination of leptonic CP violation, the neutrino mass hierarchy, and underground physics, including the exploration of proton decay and supernova neutrinos. The collaboration and the project are well organized and the U.S. Department of Energy has stated their intention to carry out this program in a phased manner. The scope of the initial phase focuses on accelerator neutrino physics and does not include deep underground placement of the far detector or the full near detector. The incremental cost of moving the phase 1 detector underground or of building a full-capability near detector complex are relatively modest: the cost of each of these is only about 15% of the LBNE phase 1 cost of ~US\$800M. LBNE represents a substantial investment from the US in a frontier facility for high energy physics. Thus, there is significant opportunity for new collaborators to leverage this major investment and add substantial scientific scope. Collaboration on the design and construction of the far detector, near detector, or neutrino beam could provide sufficient additional resources to allow us, together, to place the far detector underground in the first phase, and include a sophisticated near detector which would not only improve the accuracy of the long-baseline oscillation measurements, but have rich physics program in its own right. In this paper we describe the complete project as well as the phasing strategy.

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