

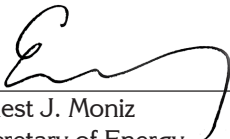
United States Department of Energy

# Department of Energy Achievement Award

Presented to

## The Office of Science's Micro Booster Neutrino Experiment Project

The Micro Booster Neutrino Experiment (MicroBooNE) project team successfully fabricated a unique, first-of-its-kind, 100-ton neutrino detector for the high energy physics program of discovery in neutrino science. The \$19 million project is a new type of experimental instrument called a Liquid Argon (LAr) Time Projection Chamber. This instrument is designed to reconstruct, in space and time, the ionizing tracks of particles emanating from the interaction of an incident neutrino with an argon atom in the detector's cryostat. The project team initiated several new techniques never before tried at this scale: (1) achieving required LAr purity without prior evacuation of the vessel; (2) use of passive insulation as an economical solution over vacuum insulation; and (3) the first-ever implementation of cryogenically cold front-end electronics in a LAr Time Projection Chamber. This effort marks a major contribution to the ultimate neutrino detector planned in the U.S.—the Deep Underground Neutrino Experiment. The project team is recognized for its ingenuity and outstanding planning to successfully complete the project early and achieve commissioning of the experiment prior to Critical Decision 4 approval.



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Ernest J. Moniz  
Secretary of Energy

March 2016