The SciBooNE neutrino experiment at Fermilab: an overview
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The precise measurement of neutrino-nucleus cross-sections in the few GeV energy range is an essential ingredient in the interpretation of neutrino oscillation experiments. For the measurement of the cross-sections, a new experiment, SciBooNE, has been proposed and approved at Fermilab. From June 2007, SciBooNE has started operation and data taking. The experiment is carried out by installing the K2K SciBar detector in the FNAL Booster Neutrino Beamline. The marriage of a high rate, low energy neutrino beam and the fine granularity of SciBar detector is unique for precise measurements of neutrino cross sections since both the beamline and detectors have been built and operated successfully. We will present an overview of the SciBooNE physics program with emphasis on unique elements of the detector systems that allow for identification and measurement of several types of neutrino interactions.