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The CAPTAIN LArTPC

CAPTAIN (Cryogenic Apparatus for Precision tests of Argon Interactions with Neutrinos) is a five tons liquid Argon Time Projection Chamber experiment with N institutions being lead by Los Alamos National Laboratory. CAPTAIN

was initiated as part of LANL Laboratory Directed Research and Development project. It is deployed in a portable cryostat and is designed to make measurements of scientific importance to long-baseline neutrino physics and

physics topics that will be explored by large underground detectors. In the initial phases of the experiment, three separate measurements are currently being planned. The first phase is the first measurement of the neutron cross section on Argon at energies relevant to neutrino energy reconstruction. The second phase is planned to be a measurement of the electron neutrino cross section on argon below 50 MeV. The third phase under consideration is a measurement of the muon neutrino cross section on argon in the NuMI beam. The hope is that these measurements will be completed in the next five years, and further measurements are possible after that point. This poster describes the CAPTAIN detector, as well as the expected run plans.

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