

Investigating Short-Baseline Neutrino Anomalies with ICARUS

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The ICARUS T600 LArTPC detector successfully ran for three years at the underground LNGS laboratories, providing a first sensitive search for LSND-like anomalous electron neutrino appearance in the CNGS beam. After a significant overhauling at CERN, the T600 detector has been placed in its experimental hall at Fermilab, filled with liquid argon, raised to the nominal drift high voltage, and the first events observed with full TPC readout. Commissioning has since been underway with regular data taking beginning in May 2021 and the first neutrino events from the Booster Neutrino Beam (BNB) and the Neutrinos at the Main Injector (NUMI) off-axis beam have been observed. Searches for sterile neutrinos will soon begin in the framework of the Short Baseline Neutrino (SBN) Program, devoted to clarifying the open questions of previously observed short-baseline neutrino anomalies. This talk will provide an overview of ICARUS and its role in the SBN Program.

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