

Abstract Submitted
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Commissioning of the ICARUS Time Projection Chambers¹

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COLLABORATION — 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, where the cryogenic plant commissioning was completed in April 2020 with the cryostats filled with liquid argon. In August 2020, the drift high voltage was raised to nominal levels and the first events observed with full TPC readout. Commissioning of the TPC system has since been underway. ICARUS is being put into operation to collect the first neutrino events from the Booster Neutrino Beam (BNB) and the Neutrinos at the Main Injector (NUMI) off-axis beam. Searches for sterile neutrinos will then begin in the framework of the Short Baseline Neutrino Program, devoted to clarifying the open questions of previously observed short-baseline neutrino anomalies. This talk will summarize the commissioning of the ICARUS time projection chambers toward taking quality data for neutrino physics analysis.

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