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The ICARUS experiment

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The 760 ton ICARUS T600 detector performed a successful three-year physics run at the underground LNGS laboratories, searching for atmospheric neutrino interactions and performing with the CNGS neutrino beam from CERN a sensitive search for LSND like anomalous nu_e appearance which contributed to constrain the allowed parameters to a narrow region around $\Delta m2^{\circ}eV2$, where all the experimental results can be coherently accommodated at 90% C.L. The T600 detector underwent a significant overhauling at CERN and has now been moved to Fermilab, to be soon exposed to the Booster Neutrino Beam to search for sterile neutrino within the SBN program, devoted to definitively clarify the open questions of the presently observed neutrino anomalies. The proposed contribution will address ICARUS achievements, its status and plans for the new run and the ongoing analyses also finalized to the next physics run at Fermilab.

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