Liquid Argon TPCs for neutrino physics
F. Varanini, B. Babussinov

Liquid Argon TPCs are one of the most innovative detection techniques in neutrino experiments. This technology proved its maturity for kton-scale detectors in the ICARUS-T600 run at Gran Sasso with CNGS beam and atmospheric neutrinos, and will be used in the present SBN experiment, searching for sterile neutrinos at FNAL, and in the future long-baseline DUNE project.

The LAr-TPC detection principles and physics performances will be discussed in detail, while the experimental work will involve a small (~25 l) LAr-TPC prototype, currently operated by the ICARUS collaboration at INFN-LNL. Cosmic ray data will be recorded and reconstructed with this test facility, Measurements of the min features, like drift velocity as a function of the TPC electric field, will be performed.