

## DUNE's ND-LAr and its prototyping program (2x2 and FSD)

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The Deep Underground Neutrino Experiment (DUNE) is a next-generation long-baseline neutrino oscillation experiment with the primary goal of measuring the mass hierarchy and CP-violating phase. Neutrinos will be measured at two detector facilities, namely a Near Detector (ND) located at Fermilab close to where the neutrino beam is produced by the Long-Baseline Neutrino Facility (LBNF) and a Far Detector located 1300 km away at the Sanford Underground Research Facility (SURF). The ND will play a crucial role in measuring the unoscillated neutrino flux, which is needed to precisely measure the neutrino oscillation probabilities and constrain systematic uncertainties. Here, we focus on the liquid argon (LAr) component of the ND, which will be an array of 7x5 LAr time projection chambers (LArTPCs) that will detect particles from their ionisation charge deposits and scintillation light signals using novel 3D pixel and high-coverage light readout systems, respectively. We present preliminary results for the 2x2 prototype of ND-LAr, comprising of four LArTPC modules at reduced length scale, which was used in a data taking campaign on the NuMI beamline at Fermilab during July 2024, as well as cosmic ray data from a single module Full Scale Demonstrator (FSD). We also give a general overview of the simulation and reconstruction software used for ND-LAr, 2x2 and FSD.

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