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First Measurement with Argontube, a 5m long drift Liquid Argon TPC

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For future neutrino oscillation experiments new large mass scale detectors are needed. One possible type of such detectors could be a liquid Argon Time Projection Chamber (LArTPC). Some technical challenges need to be addressed, like the purity of the LAr, the high voltage supply and calibration. To face these challenges, an R\&D program named Argontube is in progress at the LHEP of Albert Einstein Center of Fundamental Physics at the University of Bern. The goal is to reach a charge drift length of 5 m in liquid Argon and prove the feasibility of large volume TPCs. The Argontube detector is now built and running. In this talk, different aspects of the technology will be reviewed and new results of the first runs using the 5m long TPC will be presented.

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