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Status of single phase and dual phase DUNE protodectors at CERN MICHELLE WHILE, South Dakota School of Mines and Technology, JAROSLAW NOWAK, Lancaster University, DUNE COLLABORATION — Liquid Argon Time Projection Chamber (LAr TPC) is currently the most attractive technology for neutrino oscillations studies. Not only LAr TPCs are cost-effective and scalable to multi-ton scales, but they are also excellent calorimeters and can 3D reconstruct the tracks of ionising particles arising from neutrinos decay products. Future giant liquid Argon TPCs, at the ten-kiloton level, are now at the design and prototyping stage in the context of the Deep Underground Neutrino Experiment (DUNE). DUNE will comprise four 10 kton LAr TPC modules placed at the Sanford Underground Research Facility (SURF) in South Dakota (USA). To gain experience in building and operating such large-scale LAr detectors, two prototypes are currently under construction in the extension of CERN north experimental hall area (EHN1) which eventually will be exposed to the SPS beam. The prototypes consist of a single-phase LAr TPC, called ProtoDUNE Single-Phase (SP), and a dual-phase LAr TPC, called ProtoDUNE Dual- Phase (DP). The cryostats hosting the detectors have been already completed, and construction of the TPCs is already ongoing. The detectors will be assembled by 2018. An overview of the status and progress of both detectors and how they fit in the general context of DUNE will be addressed in this talk.

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