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【354】 First results from the $3 \times 1 \times 1 \text{ m}^3$ dual phase Liquid Argon Time Projection Chamber prototype at CERN

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The Liquid Argon Time Projection Chamber (LAr TPC) is currently the most attractive technology for neutrino oscillation studies. Both single phase and dual phase LAr TPCs are now in the design and prototyping phase in the context of the Deep Underground Neutrino Experiment. The dual phase operation allows to amplify the charge signal, offering several advantages over the single phase.

The first large scale dual phase LAr TPC with an active volume of $3 \times 1 \times 1 \text{ m}^3$ has been operated at CERN in 2017. This poster will give a detailed overview of the different reconstruction stages for dual phase LAr TPC data. Furthermore, results on the liquid argon purity, charge readout uniformity and charge-light matching for the $3 \times 1 \times 1 \text{ m}^3$ prototype are presented.

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