

## **Data reconstruction and analysis for the 3x1x1 m<sup>3</sup> dual phase Liquid Argon Time Projection Chamber prototype**

Combining high precision calorimetry with scalability to the multi-kiloton level, the Liquid Argon Time Projection Chamber (LAr TPC) has proven to be an attractive technology for long baseline neutrino oscillation experiments. An extensive R&D program for LAr TPCs at the ten-kiloton level is currently underway in the context of the Deep Underground Neutrino Experiment (DUNE). The DUNE far detector will measure the oscillated neutrino flux at a baseline of 1300 km with four 10 kiloton LAr TPC modules. Two different technologies are being explored for this purpose: single phase and dual phase LAr TPCs. The first large scale dual phase LAr TPC with an active volume of 3x1x1 m<sup>3</sup> 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 3x1x1 m<sup>3</sup> detector are presented.

### **Session and Location**

Monday Session, Poster Wall #92 (Auditorium Gallery Left)

### **Poster included in proceedings:**

yes

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**Track Classification:** Poster (participating in poster prize competition)