Contribution ID: **270**   Type: **Poster new technologies**

Recent Progress on Wire-Cell Tomographic Event Reconstruction for LArTPCs

Event reconstruction is one of the most challenging tasks in analyzing the data from current and future massive liquid argon time projection chambers (LArTPCs) and its performance is critical to physics opportunities. MicroBooNE is an approximately 90 metric ton active volume single-phase LArTPC and the first of a trio of LArTPCs in the Short Baseline Neutrino (SBN) program which will search for a light sterile neutrino and measure neutrino-Argon interaction cross sections. A novel tomographic event reconstruction method, Wire-Cell, is under development and applied in MicroBooNE. In this poster, we will introduce the principle of Wire-Cell tomographic event reconstruction, which incorporates the time, charge, geometry, and sparsity information to reduce the ambiguity from wire readout. We will describe the challenges and realistic issues. The recent progress, including the latest 3D imaging results and the preliminary 3D clustering results, will be presented.

Authorship annotation

for the MicroBooNE collaboration

Session and Location

Monday Session, Poster Wall #101 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)