Contribution ID: **52** Type: **Working Group Sessions**

Neutrino Event Selection with Wire-Cell in MicroBooNE

MicroBooNE is an 89-ton Liquid Argon Time Projection Chamber (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. Located in the Booster neutrino beam at Fermi National Accelerator Laboratory, MicroBooNE has taken neutrino data since October 2015. The near-surface operation of a LArTPC presents challenges in selecting neutrinos out of cosmic backgrounds. In this talk, we will describe the status of various technical components including noise filtering, TPC signal processing, 3D imaging, pattern recognition, TPC geometry tagging, and PMT flash matching required for selecting and analyzing neutrino events using the Wire-Cell tomographic event reconstruction. Latest results will be shown.

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Track Classification: Neutrino Physics Working Group