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# Electron neutrino selection in the MicroBooNE LArTPC using the Pandora pattern recognition reconstruction

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MicroBooNE (the Micro Booster Neutrino Experiment) is a liquid argon time-projection chamber (TPC) experiment designed for short-baseline neutrino physics, currently running at Fermilab. It aims to address the anomalous excess of low-energy events observed by the MiniBooNE experiment. In this talk the ability of the experiment to reconstruct electron neutrino-like events in the detector, using the Pandora multi-algorithm pattern recognition, will be demonstrated. In particular, we present a fully automated event selection algorithm to identify charged-current electron neutrino event candidates with no pions and at least one proton in the final state (nu_e CC0pi-Np). We discuss the combination of optical information and TPC information to reduce cosmogenic backgrounds. Additionally, we show some cuts on kinematic and geometric variables to reject background events. These cuts have been validated by analyzing two event samples orthogonal to our signal. Future improvements have been identified which will improve the reconstruction efficiency, especially at low energy. The data shown is an unblinded subsample collected by the detector between February and April 2016. It corresponds to an exposure of 4.3 × 10ˆ19 protons on target.

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