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Electron Neutrino Event Selection in MicroBooNE Using Deep Learning RUI AN, Illinois Inst of Tech, MICROBOONE COLLABORATION — MicroBooNE is currently the largest operational Liquid Argon Time Projection Chamber (LArTPC) worldwide. Collecting data since October 2015, the detector, with an active mass of 85 metric tons(170 tons in total) of argon, is located in the Booster Neutrino Beam(BNB) beamline at Fermilab with an oscillation baseline of 470 meters. MicroBooNE aims to measure neutrino cross sections on argon and provide a definitive investigation of the low energy excess of electron-like events observed by MiniBooNE. In this talk, we present a hybrid method of selecting low energy electron neutrino interactions utilizing aspects of traditional event selection alongside new image-processing techniques based on Deep Learning methods, such as Convolutional Neural Networks-based image classification.

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