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High Performance Reconstruction of Neutral Pion Decays using Wire-Cell Tools in MicroBooNE

MicroBooNE is an 85 metric ton single-phase Liquid Argon Time Projection Chamber (LArTPC) experiment at Fermilab. One main goal of MicroBooNE is to investigate the low energy excess (LEE) of electron neutrino appearance observed by the MiniBooNE experiment. The performance of neutral pion reconstruction is critical to LEE sensitivity, as photons from neutral pion decays could mimic the signature of electron neutrino appearance. A high performance reconstruction of neutral pion decays in the presence of significant cosmic activity is achieved with the Wire-Cell reconstruction method and will be described in this poster.

Mini-abstract

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Experiment/Collaboration

MicroBooNE

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