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Recent Results from MicroBooNE's Low Energy Excess Search

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MicroBooNE is a neutrino experiment that utilizes a single-phase liquid argon time projection chamber (LArTPC) located on-axis in the Booster Neutrino Beam at Fermilab. One of its primary goals is to investigate the nature of the excess of low-energy electromagnetic-like events observed by the MiniBooNE collaboration. In this talk, I will present the recent results from MicroBooNE's low energy excess (LEE) search based on a search of single photons in MicroBooNE and a series of three independent analyses leveraging different reconstruction paradigms which look for an anomalous excess of electron neutrino events. I will also discuss the interpretation of these results in the context of the 3+1 oscillation framework under a light sterile neutrino model, as well as ongoing efforts for other BSM explanations of the MiniBooNE anomaly.

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