Snowmass Joint Workshop on New Physics Opportunities with Neutrino Experiments: Theoretical & Experimental Perspectives

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MicroBooNE's Low Energy Excess Search: First Results and Future Prospects

Friday 11 February 2022 11:45 (15 minutes)

The MicroBooNE collaboration recently released a series of measurements aimed at investigating the nature of the excess of low energy electromagnetic interactions observed by the MiniBooNE collaboration. In this talk, we will present the latest results from both a search of single photons in MicroBooNE, as well as a series of three independent analyses leveraging different reconstruction paradigms which look for an anomalous excess of electron neutrino events. This talk will present details of these recent results and cross-checks to demonstrate the robustness of the analyses, and discuss both their interpretation and future studies in the wider context of the various BSM explanations of the MiniBooNE excess.

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