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Recent results from MicroBooNE

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Modelling and reconstructing neutrino-nucleus scattering is difficult, but it is crucial to do it precisely to enable next-generation oscillation measurements. Liquid argon time projection chambers (LArTPCs), such as MicroBooNE, can be the tool for this job as they are excellent precision neutrino detectors with their ability to produce detailed three-dimensional interaction images and precise energy and spatial resolution. MicroBooNE currently possesses the world's largest neutrino-argon scattering data set collected over five years using the BNB and NuMI neutrino beams at Fermilab. The experiment has performed measurements over a broad range of physics topics including neutrino-argon cross sections, searches for BSM physics, and investigations of the MiniBooNE LEE excess. Many of these measurements are essential for improving the modelling of nuclear effects for both MicroBooNE and future LArTPC neutrino experiments, such as DUNE. This talk will give an overview of recent MicroBooNE results, the analysis techniques that enable them, and prospects for future measurements.

Author: PARKINSON, Holly (University of Edinburgh)

Presenter: PARKINSON, Holly (University of Edinburgh)

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