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Measurement of Angular Correlation of Two Protons in Quasielastic Neutrino-Nucleus Cross-Section

We measure multiple proton emission in pionless, quasielastic like, charged current neutrino scattering in the MINERvA scintillator detector. The number of such observable events in MINERvA is predicted to be far greater than currently available samples. We measure the total number of such events, and study the distribution of laboratory frame angles between the multiple protons and the muon, which is sensitive to the production mechanisms for such events.

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