

New data for the comprehension of the LSND anomaly

The so-called 'LSND anomaly', a 3.8σ excess of $\bar{\nu}_e$ events, resulted in many theoretical speculations. The interpretation by the LSND authors that the anomaly originates from $\bar{\nu}_\mu \rightarrow \bar{\nu}_e$ oscillation, is inconsistent with the recent findings of the MiniBooNE Collaboration. We present a critical assessment of the prediction of the neutrino fluxes that were used in the analysis of the LSND experimental data, which possibly can shed light on the anomaly. Our appraisal is based on the pion spectra measured with the HARP large-angle spectrometer under conditions that closely reproduce the LSND situation: a proton beam with 800 MeV kinetic energy bombarding water and copper targets.

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