

Measurement of the Nucleon Axial Form Factor from Antineutrino Proton Elastic Scattering at MINERvA

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The transition axial form factor of the nucleon is a probe of nucleon structure and important for accurate prediction of charged current elastic and quasielastic scattering. Using the hydrogen in its hydrocarbon target, the MINERvA experiment has extracted a sample of antineutrino proton elastic scattering events, and directly extracted the form factor in a technique analogous to that used for the first measurements of the electromagnetic nucleon form factors in the 1950s. The results are compared to other theoretical predictions and derived measurements of the axial form factor.

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