

The Nucleon Axial Form Factor from Quantum Chromodynamics

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The nucleon axial form factor is needed to calculate the cross-section of neutrino interactions with nuclei. Due to lack of data on neutrino scattering off protons, one has to model the effect of nuclear interactions to extract it from neutrino scattering data off heavier nuclei. It is also being calculated from first principles analysis of QCD using large scale simulations of lattice QCD. By comparing the phenomenological and lattice QCD form factors, one can help constrain the modeling of nuclear effects. This talk will summarize the status of lattice QCD calculations and discuss the challenges and prospects for high precision results.

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