Hadronic Contributions to New Physics Searches



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Strange axial and vector form factors of the nucleon from lattice QCD

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Summary

We report recent lattice QCD calculations of the strange nucleon electromagnetic and axial form factors, G_E^s , G_M^s , G_A^s , and G_P^s . Using a variance-reduction technique called \emph{hierarchical probing}, we obtain a clear nonzero signal. We perform model-independent fits of the form factor shapes using the *z*-expansion. From these, we determine observables such as the strange charge radius and magnetic moment, and the contributions from light and strange quark spins to the proton spin.

Presenter: GREEN, Jeremy (Johannes Gutenberg-Universität Mainz) **Session Classification:** Flavor