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Electromagnetic properties of hadrons from lattice QCD BRIAN TIBURZI, University of Maryland, WILLIAM DETMOLD, ANDRE WALKER-LOUD, College of William and Mary — The response of hadrons to electromagnetic probes is highly constrained by chiral dynamics; but, in some cases, predictions have not compared well with experimental data. Electromagnetic properties of hadrons can be computed by lattice simulations of QCD in background fields. Focusing on calculations in background electric fields, we demonstrate new techniques to determine electric polarizabilities and magnetic moments. Results for the nucleon are presented. We argue that the lattice can be used to test the chiral electromagnetism of hadrons, and ultimately confront experiment.

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