

Updates of Nucleon Form Factors from Clover-on-HISQ Formulation

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We update the nucleon axial, electric, and magnetic form factors obtained from Clover-on-HISQ lattice formulation. Previous results from the $2 + 1 + 1$ -flavor HISQ ensembles are extended by analyzing more ensembles to cover $a \approx 0.15, 0.12, 0.09, 0.06$ fm, $M_\pi \approx 310, 220, 130$ MeV, and $3.3 < M_\pi L < 5.5$. All data are bias corrected with the AMA method. With higher statistics, we control excited-states contamination by including four states in two-point correlator fits and three states in three-point correlator fits. The axial and electromagnetic charge radii and the magnetic moment after chiral-continuum-finite volume extrapolation are compared with phenomenological data.

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