Abstract Submitted
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Accurate calulation of nucleon form factor in lattice QCD[1] EIGO SHINTANI, Mainz University — We present the accurate lattice calculation of nucleon form factor in $N_f = 2$ Wilson-clover fermion. In this calculation, we evaluate the nucleon isovector and axial-vector form factor with the new numerical technique, so-called all-mode-averaging, in order to enhance the statistical accuracy in Monte-Carlo simulation. We investigate the systematic effect on the lattice, for instance excited state contamination, large pion mass dependence, finite size effect and lattice artifact, around 200 MeV pion in 3–4 fm lattice box. We also perform the convergence test of baryon chiral perturbation theory using lattice results.

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