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nEDM from the theta-term and chromoEDM operators

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In our previous work, we showed that unresolved excited state contaminations provide a major source of systematic uncertainty in the calculation of the nucleon electric dipole moment due to the QCD topological term theta. Here we extend this result to the calculation of the nucleon electric dipole moment due to the quark chromo-electric dipole moment operator. We also show quantitatively the impact of mixing of the latter with lower-dimensional operators on the lattice. Finally, we present preliminary results from a unitary clover-on-clover calculation for the QCD topological term.

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