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Update on the isospin breaking corrections to the HVP with C-periodic boundary conditions

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In the RC* collaboration, we simulate lattice QCD+QED using C-periodic spatial boundary conditions to ensure locality, gauge invariance, and translational invariance are preserved throughout the calculation. In this talk, we present progress in computing isospin-breaking (IB) corrections to the leading hadronic contribution to $(g - 2)$. We compare two ways of computing the IB corrections: the RM123 method on a QCD ensemble and dynamical QCD+QED simulations, both with C-periodic boundary conditions. Both calculations are performed at $\beta = 3.24$ with four flavours of O(a)-improved Wilson fermions; the QCD ensemble features SU(3)-symmetric sea quarks plus charm, while down and strange quarks are degenerate in QCD+QED gauge ensembles. We discuss the limitations and merits of the two approaches.

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