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C3: Progress report on computing the disconnected QCD and the QCD plus QED hadronic contributions to the muon's anomalous magnetic moment.

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The recent experimental result for the muon's anomalous magnetic moment from Fermilab motivates the reduction of the errors on lattice QCD calculations of the leading order hadronic contribution. All of our calculations use the highly-improved staggered quark (HISQ) formulation. The gauge configurations are generated with four flavors of HISQ sea quarks with physical sea-quark masses. The disconnected QCD calculation use configurations at the three lattice spacings: 0.15, 0.12 and 0.09 fm. We report preliminary results for some of the QED+QCD contributions at one lattice spacing, which use either quenched photons or QCD gauge configurations that include the dynamics of QED in the sea.

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