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Leading order hadronic contribution to g-2 from twisted mass QCD

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The hadronic contributions to the anomalous magnetic moment of the muon are an interesting challenge for lattice QCD calculations, especially given a persistent discrepancy between theory and experiment. We have calculated the leading order hadronic contribution for pion masses from 270 MeV to 600 MeV using two flavors of dynamical twisted-mass fermions. We have examined the finite-size dependence with spatial volumes ranging from $(1.6 \text{ fm})^3$ to $(2.7 \text{ fm})^3$ and we have studied lattice artifacts with lattice spacings of 0.086 fm and 0.067 fm.

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talk

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