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A continuum determination of the strong isospin-breaking contribution to the muon anomalous magnetic moment

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We present a continuum determination of a_mu^SIB, the strong isospin-breaking contribution to a_mu, the anomalous magnetic moment of the muon, using ChPT and the formulation of a_mu as a weighted integral of the electromagnetic current two-point function over Euclidean Q^2. Flavor-breaking hadronic tau decay sum rules are shown to provide a determination of a key higher-order chiral LEC encoding numerically important resonance region contributions. Implications of the structure of the result for the lattice determination of a mu^SIB are also discussed.

What is your topic?

Anomalous Magnetic Moment of the muon

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