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Muon g-2 to $\Delta\alpha$

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The Muon □–2 experiment at Fermilab has recently confirmed Brookhaven's earlier measurement of the muon anomalous magnetic moment. This new result increases the muon g-2 discrepancy with the Standard Model prediction and strengthens its "new physics" interpretation, as well as the quest for its underlying origin. I will discuss the connection of the muon g-2 discrepancy to precision electroweak predictions via their common dependence on hadronic vacuum polarization effects. This is particularly relevant for the ongoing comparison between results for hadronic vacuum polarization effects as calculated from hadronic cross section data and from lattice QCD.

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