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Connecting lepton flavor violation and the muon anomalous magnetic moment

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The quest for the UV completion of the Standard Model can be addressed not only by means of direct collider signatures of new physics, but also via the effects of currently inaccessible physics on low-energy observables. Lepton flavor violating transitions and measurements of the leptonic magnetic moments offer gripping tests for new physics from low to high energies. In this talk the interplay between both signatures is described in a model-independent way and their usefulness is highlighted for several specific UV completions of the Standard Model. We stress that the potential excess observed in the measurement of the muon magnetic moment over the Standard Model prediction in recent experiments could be testable in the near future through lepton flavor violation.

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