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Rare Particle Decays

High precision and high sensitivity measurements of rare and ultra-rare decays of muons and light mesons can be used to probe for physics beyond the Standard Model, testing it the level of its quantum loop predictions to possibly reveal new interactions at scales of order 1000 TeV. Precise measurements of muon, pion, and kaon decays address the flavor puzzle, the presence of three flavors of quarks and leptons, through studies related to the lepton flavor violation, universality of weak interactions, flavor-changing neutral currents, and CP symmetry violation. The status and prospects for a few special high sensitivity experiments involving lepton flavor violating muon interactions, pion decays, and kaon decays will be reviewed.

Keyword-1

Rare Particle Decays

Keyword-2

Rare/Ultra-Rare

Keyword-3

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