

Dineutrino modes probing LFV

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$SU(2)_L$ -invariance links charged dilepton $\bar{q} q' \bar{\ell} \ell$ and dineutrino $\bar{q} q' \bar{\nu} \nu$ couplings. This connection can be established using SMEFT and holds if only SM-like left-handed light neutrinos are present. It allows to perform complementary experimental tests of lepton universality and charged lepton flavor conservation with flavor-summed dineutrino observables. Phenomenological implications are worked out for flavor changing neutral currents involving strange, charm and beauty quark transitions in a model-independent way.

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