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## Interplay between dineutrino modes with semileptonic decays

*Friday 30 July 2021 10:30 (15 minutes)*

$SU(2)_L$ -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. The phenomenological implications are discussed in detail for the branching ratios of rare charm decays  $c \rightarrow u\nu\bar{\nu}$ , such as  $D^+ \rightarrow \pi^+\nu\bar{\nu}$ , and rare  $B$  decays  $b \rightarrow q\nu\bar{\nu}$  with  $q = d, s$  decays.

### Collaboration / Activity

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