

Flavor Changing Neutral Currents and a Z-prime

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Many extensions of the standard model contain an additional $U(1)'$ gauge group with an associated Z' gauge boson. In some of those constructions the $U(1)'$ charges are generation dependent and therefore introduce tree-level flavor changing neutral currents mediated by the Z' . We discuss the phenomenology of these FCNC couplings for meson decays and possible LHC implications. We discuss a class of models with a down-quark mass matrix of the Georgi-Jarlskog type which naturally satisfies the current experimental constraints on FCNC.

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