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Weak Interaction Models with New Quarks and Right-Handed Currents *

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ABSTRACT

We discuss various weak interaction issues for a general class of models within the $SU(2) \times U(1)$ gauge theory framework, with special emphasis on the effects of right-handed, charged currents and of quarks bearing new quantum numbers. In particular we consider the restrictions on model building which are imposed by the small $K_L - K_S$ mass difference and by the $\Delta I = \frac{1}{2}$ rule; and we classify various possibilities for neutral current interactions and, in the case of heavy mesons with new quantum numbers, various possibilities for mixing effects analogous to $K_L - K_S$ mixing.

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