

Flavour changing matrix elements for physics beyond the SM

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Flavour changing neutral current and CP violating processes provide the testing ground for physics beyond the SM. The evaluation of the relevant hadronic matrix elements is crucial for the precision of the theoretical predictions. While waiting for precise lattice calculations we revisit the dipole and current-current $K \rightarrow \pi\pi$ hadronic matrix elements in the framework of the phenomenological chiral quark model; these are relevant for the calculation of direct CP violation in $K \rightarrow \pi\pi$ decays in a left-right extension of the electroweak interaction. We discuss the uncertainties of the calculation in view of the phenomenological character of the approach and provide the results for a direct comparison with forthcoming lattice evaluations.

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