

Analysis of the $B^{+-} \rightarrow K^+ K^- K^{+-}$ decays

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Rare B^{+-} decays to three charged kaons are analysed. The weak decay amplitudes are derived in the QCD factorization approach. The strong final state interactions between pairs of kaons are described using the kaon scalar and vector form factors. The scalar form factors at low $K^+ K^-$ effective mass distributions are constrained by chiral symmetry and related to the coupled channel meson-meson amplitudes describing all the transitions between three channels consisting of two kaons, two pions and four pions. The vector form factors are fitted to the data on $e^+ e^-$ collisions.

The model results are compared with the Belle and BaBar data on the $K^+ K^-$ effective mass distributions, branching fractions and the CP asymmetries.

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