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# B mixing, supersymmetry and GUTs

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The 2010 data on quark flavour physics reveal a considerable tension
with the Standard Model. However, an excellent fit is found if one
permits new physics in the amplitudes describing meson-antimeson mixing in the B_d and B_s systems. The corresponding global analysis disfavours the Standard Model at the level of 3.6 standard deviations and calls for new sources of CP violation in the B-Bbar mixing amplitudes. The Minimal Supersymmetric Standard Model (MSSM) with the popular MFV hypothesis cannot explain this discrepancy. I discuss several viable explanations, ranging from the MSSM with radiative flavour violation to an SO(10) GUT model with novel b->s transitions driven by the atmospheric neutrino mixing angle.

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