

Probing the MSSM flavor structure with low energy CP violation

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We present a systematic study of the low energy phenomenology of CP violation in $b \rightarrow s$ transitions within the MSSM. Allowing for the presence of new sources of CP violation, we discuss the Minimal Flavor Violation framework, scenarios with generic new flavor structures in the soft SUSY breaking sector and also setups where the quark and squark masses are determined by underlying flavor models. In particular, we address the question how large the New Physics contribution to CP violation in B_s mixing can be and we outline strategies to disentangle among the different SUSY scenarios by means of a correlated analysis of both $\Delta F=1$ and $\Delta F=2$ low energy observables.

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