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Squark Flavor Implications from B –> K^(*) l^+ l^–

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Recent experimental and theoretical progress regarding B –> K^(*) l^+ l^– decays led to improved bounds on the Wilson coefficients C_9 and C_10 of four-fermion operators of the $|\Delta B| = |\Delta S| = 1$ effective Hamiltonian. We analyze the resulting implications on squark flavor violation in the MSSM and obtain new constraints on flavor-changing left-right mixing in the up-squark-sector. We find the dimensionless flavor mixing parameter (δu^23)_LR, depending on the flavor-diagonal MSSM masses and couplings, to be as low as ⊠ 0.1. This has implications for models based on radiative flavor violation and leads to BR(B_s –> μ^+ μ^–) ⊠ 1×10^–9. Rare top decays t –> c γ, t –> c g, t –> c Z have branching ratios predicted to be below ⊠ few × 10^–8, 10^–6 and 10^–7, respectively.

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