Quirks in Quark Flavour Physics 2024



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Indirect constraints on third generation baryon number violation

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Given the flavour anomalies, one might speculate that baryon number violation involving third family quarks could happen at a much lower scale than the GUT scale. In this talk I will describe how to constrain baryon number violating operators involving a bottom quark from proton lifetime bounds. As a result one can estimate the maximum branching fraction expected in baryon number violating B decays, turning out to be far from current sensitivities at B-factories. This in fact discourage direct experimental searches of baryon number violation in B decays.

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