

Phenomenology 2018 Symposium



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Wino contribution to $R_{K^{(*)}}$ with R -parity violation

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There are presently many different anomalies in B -physics. One such anomaly is $R_{K^{(*)}}$, the apparent deficit of decays $B \rightarrow K\mu\mu$ compared to $B \rightarrow Kee$. In this talk, I will attempt to explain this apparent violation of lepton flavour universality within a supersymmetric framework. To do so, I will invoke the R -parity violating superpotential term $\lambda' LQD^c$ and then study potential wino contributions. This will lead to a spectrum of sparticles consisting of winos and left-handed up squarks with masses of order 1 TeV and right-handed down squarks and sneutrinos with masses of order 10 TeV. Potential constraints from low energy processes and direct LHC searches are examined and other features of the model such as Landau poles and neutrino masses will be discussed.

Summary

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