

Phenomenology 2019 Symposium



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A Tale of Two Anomalies: from LHCb to ANITA

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We propose a simultaneous explanation of two recent anomalous observations at very different energy scales. The first one concerns hints of lepton flavor universality violation in rare B-meson decays, as observed by LHCb, and to some extent, by Belle and BaBar. The second anomaly is the observation made by the ANITA balloon experiment of two EeV upgoing air showers. Both these observations are challenging to explain within the Standard Model. We show that there exists a natural explanation for both the anomalies in the framework of R-parity violating supersymmetric extension of the Standard Model with TeV-scale squarks and a GeV-scale bino, which are consistent with all existing constraints from the LHC and low-energy experiments. This scenario could be fully tested in the near future and provides a complementary way to discover supersymmetry.

Summary

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