

Probing New Physics: The Role of Vector-Like Quarks in Rare B-Decays

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We investigate the impact of Vector-Like Quarks (VLQs) on rare B-decay processes. Our approach involves careful examination of VLQ contributions in light of the most recent lower mass limit set by direct search data at LHC. By employing both symbolic and numerical computations, we compare our theoretical produce predictions in agreement with the latest Belle-II results, covering more than 3 sigma deviation from SM expectations. This study aims to shed light on a possible new physics beyond the Standard Model scenario and offer valuable insights for future experimental searches.

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