

Exploring the Influence of Vector Like Quarks (VLQs) in Rare B-Decays

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The study of rare B- decays provides a unique opportunity to probe the Standard Model and search for signs of new physics. In particular, the VLQs (iso-singlet down-type), characterized by their isospin singlet nature, can play a significant role in these rare decays. We investigate the impact of the VLQ on the $B \rightarrow s\mu^+\mu^-$ decay process, starting by reviewing the theoretical framework of the Standard Model and introducing the relevant Feynman diagrams associated with the $B \rightarrow s\mu^+\mu^-$ decay and then highlighting potential implications of VLQs.

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