Title:	Study of cLFV decays in bb at Belle II
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Abstract:	The Belle II experiment at the SuperKEKB is an electron positron collider that pro- duces an instantaneous luminosity of 8×10 35 cm −2 s −1 and the experiment is expected to accumulate a data sample of about 50 ab −1 . With this amount of data, decays sensitive to physics beyond the Standard Model can be studied with unprecedented precision. In the search for Charged Lepton Flavor Violation (cLFV) in bottomonium ($b\bar{b}$) decays, we look through 1 million events for Y(2S) sample simulated through the Belle II detector. Now for cLFV transition, Y(1S) has been studied in Y(2S) → π + π − Y(1S)[→ τ + τ −], τ ± → πππν and ππν decays. The presence of neutrinos in the above decay chain makes it difficult to reconstruct full signal and results in large background. We need proper methods to reduce the background and identify the signal. The aim of this project was to do so and perform sensitives study.
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