





Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali / Thesis & Dissertation / Master of Science / MS-15

Please use this identifier to cite or link to this item: http://hdl.handle.net/123456789/1420

Study of cLFV decays in bb at Belle II

Authors: Dhayal, Ravinder

Keywords: cLFV

Belle II

Issue May-2020

Date:

Title:

Publisher: IISERM

Abstract:

The Belle II experiment at the SuperKEKB is an electron positron collider that pro- duces an instantaneous luminosity of $8\times10~35~cm~2~s~1$ 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 (bb) 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) $\rightarrow \pi + \pi - Y(1S)[\rightarrow \tau + \tau -]$, $\tau \pm \rightarrow \pi\pi\pi\pi\nu$ and $\pi\pi\nu$ 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.

URI: http://hdl.handle.net/123456789/1420

Appears in MS-15 Collections:

Files in This Item:

File	Size	Format	
MS15068.pdf	1.91 MB	Adobe PDF	View/Open

Show full item record

di

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

Theme by CINEC

Customized & Implemented by - Jivesna Tech