

Title: GPPU Progress Report - Lepton Universality Tests at Belle II -

Abstract:

In the standard model of particle physics, three generation of charged and neutral leptons have are universal in the weak interaction. However, various recent study on B meson decays differ from the lepton flavor universality. Rare semi-leptonic $b \rightarrow sl+l^-$ transitions are some of the most promising frameworks to search for new physics effects. Analyses on inclusive decays $B \rightarrow Xsl+l^-$ provide important cross-checks of the deviations found on exclusive decays.

In this presentation, I would like to talk about the motivation of the study and current progress. I have developed the framework of systematic study of particle identification, especially charged leptons during the visit to DESY which is supported by GP-PU. Systematics of charged leptons is one of the most important sources of systematic uncertainty for the study. I also would like to talk about GP-PU activities and a future plan.