

Implications of Lepton nonuniversality in Flavor sector

The results from B factories provided the confirmation of the Cabibbo-Kobayashi-Maskawa mechanism of CP violation in the framework of the standard model. LHCb has also started contributing in this direction and all the results obtained so far are in agreement with the standard model (SM) expectations and there is no clear sign/ indication of physics beyond the SM, even though there are few cases in which the SM predictions and data differ by few sigma. Whether these will lead to some beyond SM signal, with accumulation of more data in LHCb and Belle-II, or not it is difficult to conclude. However, in this work we will consider the deviation observed (in Belle, Babar and LHCb) in the lepton nonuniversality of $b \rightarrow c$ transitions, which appears to be more than 3 sigma at this point of time (in the form R_D and R_{D^*} discrepancy). We employ model independent method and model dependent method to find out any clue to the nature of new physics. In this context we have used Left Right symmetric model, which appears to be one of candidates for physics beyond the SM.

Summary

Primary author: GIRI, Anjan (IIT Hyderabad)

Co-authors: MOHANTA, Rukmani (University of Hyderabad); Ms SAHOO, Suchismita (University of Hyderabad)

Presenter: GIRI, Anjan (IIT Hyderabad)