

## 7th Edition of the Large Hadron Collider Physics Conference



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### Flavor violation in meson decays

Some extended models predict the existence of a new neutral massive gauge boson, identified as the  $Z'$  boson, together with flavor-changing neutral currents. In this theoretical framework, we estimate the intensity of couplings regarding the interaction between the  $Z'$  boson with the bottom and the strange quarks through the  $B_s^0 \rightarrow \mu^+ \mu^-$  transition, which allow us to study the  $B_s^0 \rightarrow \tau\mu, \tau e, \mu e$  decays. We present preliminary results, where the corresponding branching ratios are estimated; our predictions are contrasted with similar ones coming from several extended models. In particular, our estimates for the branching ratios range between  $10^{-9}$  and  $10^{-6}$ .

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