

Complementary test of lepton flavor universality violation in $B_s \rightarrow f_2'(1525) (\rightarrow K^+ K^-) \mu^+ \mu^-$ decays

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The lepton flavor universality violation has been reported in the various flavor ratios such as R_K , R_{K^*} , and P_5' in $B \rightarrow K^{(*)} \mu^+ \mu^-$ decays. In this context, we perform an angular analysis of the four-body differential decay of $B_s \rightarrow f_2'(1525) (\rightarrow K^+ K^-) \mu^+ \mu^-$ in a model independent effective field theory formalism and provide a complementary information on the lepton flavor universality violation. The underlying decay mode proceed via similar $b \rightarrow s l^+ l^-$ quark level transition. We give predictions of various physical observables for $B_s \rightarrow f_2'(1525) (\rightarrow K^+ K^-) \mu^+ \mu^-$ decays in SM and in the presence of various NP scenarios. This can be easily tested in the upcoming LHCb experiments.

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Secondary track (number)

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