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## 304 On $R_K$ and the global significance of new physics in $b \rightarrow s\ell\ell$ decays

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Ratios of branching fractions such as  $R_K = \mathcal{B}(B^+ \rightarrow K^+ \mu^+ \mu^-) / \mathcal{B}(B^+ \rightarrow K^+ e^+ e^-)$  are clean probes of lepton flavour universality (LFU) violation. LHCb published the most accurate measurement of this observable up to date, yielding a value  $3.1\sigma$  away from the Standard Model prediction, providing the first evidence of LFU violation. This is another piece added to the puzzle of flavour anomalies observed in different processes governed by the  $b \rightarrow s\ell\ell$  transition. I will give an overview of the measurement of  $R_K$  and illustrate a method to assess the global significance of the New Physics hypothesis in the  $b \rightarrow s\ell\ell$  system taking into account the Look-elsewhere effect.

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