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## **[316] Overview of very rare decays at LHCb**

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In LHCb very rare decays are defined as decays that are forbidden in the Standard Model or with branching ratios smaller than  $10^{-8}$ . These include purely leptonic decays as  $B_{s} \rightarrow \mu\mu$ ,  $K_{s} \rightarrow \mu\mu$ ,  $B_{s} \rightarrow \tau\tau$ , which are loop decays very suppressed in the Standard Model but can be highly enhanced in new physics scenarios. Predictions for such decays are very clean and therefore they constitute excellent tests for the Standard Model. Lepton flavour violating and Lepton number violating decays are also searched at LHCb, and, as these are effectively forbidden in the Standard Model, any observed signal would be a clear sign of new physics. An overview of analyses and searches for very rare decays at LHCb is presented.

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