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Electroweak Penguin Decays at LHCb

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Rare $b \rightarrow sll$ decays are flavour changing neutral current processes that are forbidden at the lowest perturbative order in the Standard Model (SM). As a consequence, new particles in SM extensions can significantly affect the branching fractions of these decays and their angular distributions. Particularly interesting are extensions of the SM that violate lepton flavour universality. Since rare decays of heavy flavour are heavily suppressed in the SM and new particles can give sizeable contributions to these processes, thus their precise study allows for sensitive tests of lepton flavour universality. The LHCb experiment is ideally suited for the analysis of these decays due to its high trigger efficiency, as well as excellent tracking and particle identification performance. Recent results from the LHCb experiment in the area of $b \rightarrow sll$ decays are presented and their interpretation is discussed.

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