Anomalies in rare B decays

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Rare decays of b-hadrons, which proceed via flavour changing neutral currents, are strongly suppressed in the Standard Model (SM). They are thus extremely sensitive probes for possible contributions from new heavy particles beyond the SM.

This talk will give an overview of experimental results on rare $b \rightarrow s \Box \Box$ decays with focus on results from the LHCb experiment. In this area, several intriguing tensions with SM predictions have recently emerged in measurements of decay rates and angular distributions. Particular emphasis will be placed on tensions in tests of lepton universality, where extremely clean SM predictions are available. Furthermore, possible theoretical interpretations of these anomalies will be discussed.