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## New physics searches with EW penguins and radiative B decays at LHCb

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Rare  $b \rightarrow s(\gamma, \ell\ell)$  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 give rise to new sources of CP-violation.

The LHCb experiment is ideally suited for the analysis of rare decays due to the large cross-section for  $b\bar{b}$  production at the LHC, as well as its high trigger efficiency and excellent tracking and particle identification capabilities.

Recent results from the LHCb experiment in the area of semileptonic and radiative  $b \rightarrow s$  transitions are presented and their interpretation is discussed.

### Experimental Collaboration

LHCb

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**Session Classification:** Flavour and symmetries

**Track Classification:** Flavour Physics and Fundamental Symmetries