

Abstract Submitted  
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**Rare decays at LHCb** PREEMA PAIS, EPFL Lausabbe, Switzerland,  
MIKE SOKOLOFF, Univ of Cincinnati — Rare decays are flavour changing current processes that allow sensitive searches for phenomena beyond the Standard Model (SM). In the SM, rare decays are loop-suppressed and new particles in SM extensions can give significant contributions. Of particular interest is the very rare decay  $B_s \rightarrow \mu^+ \mu^-$  which is in addition helicity suppressed and constitutes a powerful probe for new (pseudo) scalar particles. 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 rare decays are presented and their interpretation is discussed.

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