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Measurements of hadron production in LHCb and their impact on modeling of extensive air showers

The LHCb experiment at CERN employs a general-purpose forward spectrometer designed to study heavy flavour physics at the LHC. The acceptance of the spectrometer covers the pseudorapidity range $2 < \eta < 5$ and provides full tracking and particle identification down to very small transverse momenta. This makes LHCb also ideal to study hadronic interactions similar to those that occur in extensive air showers initiated by cosmic rays. In addition, the operation of the LHC with oxygen beams this summer will for the first time allow us to probe the exact conditions of the interactions in air showers. In this contribution I will summarize measurements of hadronic particle production done at LHCb, discuss their implication for models of interactions in air showers and which measurements should be performed in the future to provide better constraints.

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