

Measurements of particle production in pp--collisions in the forward region at the LHC

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The phase space coverage of the LHCb detector allows a unique insight into the particle production in the forward region at the LHC. Due to its unique pseudorapidity coverage and the possibility of extending the measurements to low transverse momenta, the LHCb data provide important input to the understanding of particle production in a kinematical range where QCD models have large uncertainties. Measurements of the production of charged particles, K^0_S and ϕ mesons are presented. In addition the ratio of p_{bar}/p and $\Lambda_{\text{bar}}/\Lambda$ are presented as a function of rapidity and transverse momentum for centre-of-mass energies $\sqrt{s} = 0.9$ TeV and 7.0 TeV, probing baryon number transport from the beam. Baryon strangeness suppression is studied through the measurement of $\Lambda_{\text{bar}}/K^0_S$. The measurements are compared with lower energy measurements, phenomenological models and Monte Carlo event generators.

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