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Measurements of Hadron Production at CMS

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We report on measurements of hadron production in pp collisions at √s = 0.9, 2.36 and 7 TeV, recorded with the CMS detector. Transverse momentum, pseudorapidity and multiplicity distributions of charged hadrons are presented. For non-single diffractive collisions, the average charged-hadron transverse momentum and pseudorapidity density near mid-rapidity are compared with other measurements in ppbar and pp collisions. To extend the statistical reach of the measurements of charged hadron transverse momentum spectra, calorimeter-based high-ET jet triggers are employed to enhance yields at high pT. Finally, measured spectra of identified hadrons are presented. The charged pions, kaons and protons are identified with help of their energy loss in the silicon tracker, while the K°s and lambda and anti-lambda are reconstructed based on their decay topology. The obtained rapidity and pT spectra, as well as per event yields are compared to theoretical models. The energy dependence of the above quantities is also studied.

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