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## Features of W production in p-p, p-Pb and Pb-Pb collisions

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We consider the production of inclusive W bosons in variety of high-energy hadronic collisions: p-p, p-p $\bar{p}$ , p-Pb, and Pb-Pb. In particular, we focus on the resulting distributions of charged leptons from W decay that can be measured with relatively low backgrounds. The leading-order expressions within the collinearly factorized QCD indicate that the c.m. energy dependence at forward/backward rapidities should be well approximated by a simple power law. The interpretation of the scaling exponent is in the small-x behaviour of the quark distributions, which is largely driven by the parton evolution. An interesting consequence is the resulting, extremely simple scaling law for the lepton charge asymmetry which relates measurements in different collision systems. The expectations are contrasted with the existing data and a very good overall agreement is found. Finally, we propose precision observables to be measured at the LHC.

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