

EKRT-model predictions for 5.02 TeV Pb+Pb collisions at the LHC

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We present the recent results from the event-by-event next-to-leading order perturbative-QCD + saturation + viscous hydrodynamics (EKRT) model [1,2]. In particular, we show the computed predictions for the centrality dependence of charged hadron multiplicity, flow coefficients of the azimuthal-angle asymmetries and correlations of event-plane angles in 5.02 TeV Pb+Pb collisions at the LHC. The centrality dependencies of the studied observables, and the magnitude of the flow coefficients and event-plane angle correlations are predicted to be similar to those at 2.76 TeV. Overall, our predictions match very well with the new LHC measurements [3,4]. In addition, we show that the computed flow coefficients provide slightly more discriminating power on the temperature dependence of QCD matter viscosity than the 2.76 TeV measurements.

[1] H. Niemi, K. J. Eskola, R. Paatelainen and K. Tuominen, Phys.Rev. C93 (2016) 1, 014912, arXiv:1511.04296 [hep-ph].

[2] H. Niemi, K. J. Eskola and R. Paatelainen, Phys. Rev. C93 (2016) 2, 024907, arXiv:1505.02677 [hep-ph].

[3] J. Adam et al. [ALICE Collaboration], arXiv:1602.01119 [nucl-ex].

[4] J. Adam et al. [ALICE Collaboration], arXiv:1512.06104 [nucl-ex].

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