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Spectra and elliptic flow of charmed hadrons in HYDJET++ model

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Heavy-flavour quarks are predominantly produced in hard scattering on a short time-scale and traverse the medium interacting with its constituents, thus they are one of the effective probes of the transport properties of the medium formed in relativistic heavy ion collisions. On the other hand, the thermal production of heavy-flavour quarks in quark-gluon plasma is itself of interest.
In this report, the production and elliptic flow of the prompt charmed mesons D^{0}, D^{+}, and D^{*+} and J/psi in PbPb collisions at the center-of-mass energy 2.76 TeV per nucleon pair are described in the frameworks of two-component HYDJET++ model. The model combines thermal and pQCD production mechanisms.
The nuclear modification factor and elliptic flow of charmed mesons are presented, the results are compared with LHC data.

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