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Z-boson pT-spectrum and lepton angular coefficients in the LO high-energy factorization with the real NLO corrections

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We study Z-boson production at the LHC energies within framework of the parton Reggeization approach of high-energy QCD [1,2]. Oppositely the previous calculation [3], based on LO approximation with the partonic process $Q + \bar{Q} \to Z$, we take into account NLO contribution from the partonic process $Q + R \to q + Z$, where R is the Reggeized gluon and Q is the Reggeized quark. The good agreement with experimental data as for Z-boson pT-spectra as for total cross section was found. The lepton angular coefficients in Z-boson events are studied by the same way, in the LO and in the NLO of the Parton Reggeization approach. The last one is performed in the high-energy factorization in the first time.

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