

## Challenges and problems in charmonium production at the SPD NICA

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The SPD NICA is planned to operate as a universal facility for comprehensive study of the unpolarized and polarized gluon content of the nucleon at large Bjorken- $x$ , using different hard probes. The first one is charmonium

production processes. The experiment aims to provide access to the gluon helicity, gluon Sivers and Boer-Mulders PDFs in the nucleon. In this talk, we present an overview of theoretical predictions for  $J/\psi$ ,  $\chi_c$ ,  $\eta_c$  and  $J/\psi + \gamma$  production

in unpolarized and polarized pp-collisions at the  $\sqrt{s} = 27$  GeV. We use collinear parton model and generalized parton model as well as two models of  $c\bar{c}$  hadronization into the final charmonium, Nonrelativistic QCD and Improved Color Evaporation model.

Information on the subject:

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