Joint 20th International Workshop on Hadron Structure and Spectroscopy and 5th workshop on Correlations in Partonic and Hadronic Interactions



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## SPD project at NICA

Wednesday 2 October 2024 16:05 (25 minutes)

The SPD experiment will operate at one of the two interaction points of the NICA collider facility at JINR. The collider will provide polarized proton and deuteron beams for pp and dd collisions with the c.m.s. energy up to  $\sqrt{s}=27$  GeV and  $\sqrt{s_{NN}}=13.5$  GeV, respectively. The primary goal of the experiment is to study the polarized and unpolarized gluon structure of proton and deuteron. The gluon TMD functions (helicity, Sivers, Boer-Mulders, and gluon transversity in the case of deuterons) will be probed with the open charm, charmonia, and prompt photon production. In addition to the primary goals of the experiment, the physics program of the experiment extends to investigation of various aspects of QCD. This talk will give an overview an overview of the physics program, the experimental setup and the status of the project.

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