Contribution ID: **333** Type: **Plenary report**

Physics with SPD experiment at NICA collider

Monday, 20 September 2021 11:25 (35 minutes)

A brief overview of the Spin Physics Detector (SPD) experiment is presented.
SPD is a future multipurpose experiment foreseen to run at the NICA collider, which is currently under construction at the Joint Institute for Nuclear Research (JINR, Dubna, Russia).
The physics program of the experiment is based on collisions of longitudinally and transversely polarized protons and deuterons at c.m.s. NN energy up to 27 GeV and luminosity up to $10^{32}\text{cm}^{-2}\text{s}^{-1}$.
SPD will operate as a universal facility for the comprehensive study of the unpolarized and polarized gluon content of the nucleon, using complementary probes such as: charmonia, open-charm, and prompt-photon production processes.
Possible SPD studies at the first stage of the NICA collider operation with unpolarized proton and deuteron beams are also discussed.

Primary author: KIM, Victor (Petersburg Nuclear Physics Institute - PNPI NRC KI, Gatchina & SPbPU, St. Petersburg)

Presenter: KIM, Victor (Petersburg Nuclear Physics Institute - PNPI NRC KI, Gatchina & SPbPU, St. Petersburg)

Session Classification: Plenary

Track Classification: Section 4. Relativistic nuclear physics, elementary particle physics and high-energy physics.