

The Spin Physics Detector project at the future NICA complex at JINR (Dubna, Russia) aims to investigate the nucleon spin structure and polarization phenomena in collisions of longitudinally and transversely polarized protons and deuterons at \sqrt{s} up to 27 GeV and luminosity up to $10^{32} \text{ cm}^{-2} \text{ s}^{-1}$. In particular such probes as charmonia, prompt photons, and open charm provide access to polarized gluon content of proton and deuteron at moderate and high-x region. Tensor structure of deuteron could also be investigated. The experimental setup is planned as a universal 4π detector for a wide range of physics tasks. Physics program and overview of the detector will be presented.

The Spin Physics Detector project at the future NICA complex at JINR (Dubna, Russia) aims to investigate the nucleon spin structure and polarization phenomena in collisions of longitudinally and transversely polarized protons and deuterons at \sqrt{s} up to 27 GeV and luminosity up to $10^{32} \text{ cm}^{-2} \text{ s}^{-1}$. In particular such probes as charmonia, prompt photons, and open charm provide access to polarized gluon content of proton and deuteron at moderate and high-x region. Tensor structure of deuteron could also be investigated. The experimental setup is planned as a universal 4π detector for a wide range of physics tasks. Physics program and overview of the detector will be presented.

Submitted on behalf of a Collaboration?

Yes

Author: Dr GUSKOV, Alexey (Joint Institute for Nuclear Research (RU))

Presenter: Dr GUSKOV, Alexey (Joint Institute for Nuclear Research (RU))

Session Classification: WG6: Future Experiments

Track Classification: WG6: Future Experiments