# Optimization of techniques for lambda hyperon measurement at MPD/NICA

V.Kolesnikov, D.Suvarieva, V.Vasendina, A.Zinchenko
(For the MPD Collaboration)

Obtaining quality physics results requires high-statistics data with low background contamination. The task of maximizing the signal as well as accurate estimation of combinatorial background is especially important at the start-up of the experiment when the amount of data is rather limited. The MPD experiment at the NICA collider will have to deal with such issues in its first run.

In the talk, the task of reconstruction of lambda hyperons with their weak decay into a proton and a negative pion is considered using Monte Carlo generated event sample of central Au + Au collisions at $\sqrt{s_{NN}} = 9$ GeV. Two approaches for evaluating the combinatorial background in the invariant mass spectra of decay products are presented: like-sign pair combinations and event mixing.

Background-subtracted and efficiency-corrected hyperon distributions are presented demonstrating the MPD performance in the future collider run.