

Prospects of photon conversion measurements in the future MPD experiment at NICA

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The future MPD experiment at the NICA collider is aimed to study hot and dense matter created in heavy ion collisions at center-of-mass energies from 4 to 11 GeV. Measurements of photon spectra via reconstruction of electron-positron pairs from photon conversions provide a unique opportunity to probe the temperature of the produced medium and study π^0 and eta meson yields down to low transverse momenta. In this contribution, feasibility of photon conversion measurements with the MPD experiment will be discussed. A proposal to increase the photon conversion probability with a dedicated retractable converter will be presented and the prospects to probe the material budget of the experiment with converted photons will be evaluated.

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