Contribution ID : **266** Type : **Oral talk**

Measurement of e^+-e^- pairs in the MPD Experiment at NICA Complex

Thursday, 29 October 2026 18:35 (15)

The Multi-Purpose Detector (MPD) experiment is a flagship heavy-ion experiment of the NICA facility at JINR, Dubna, currently under commissioning. The experiment will operate in the energy range $\sqrt{s_{NN}}$ = 4-11 GeV in collider mode and $\sqrt{s_{NN}}$ = 2.4-3.5 GeV in fixed-target mode, together covering the high net-baryon density region of the QCD phase diagram. Dielectron measurements in heavy-ion collisions probe the temperature of the fireball as well as in-medium modification of the vector meson spectral function.

The MPD experiment offers excellent track reconstruction and electron identification capabilities, making it well suited for the measurements of dielectrons. In this presentation, after briefly reporting the current status of the NICA facility and the MPD experiment, we present the dielectron analysis methodology developed for the MPD experiment as established and validated in the collider-mode. We will further present preliminary performance results of MPD in dielectron measurements in the fixed-target configuration.

Primary author(s) : RODE, Sudhir Pandurang (JINR)

Presenter(s) : RODE, Sudhir Pandurang (JINR)

Session Classification : Heavy ion physics

Track Classification : Heavy ion physics