

XXV International Baldin Seminar on High Energy Physics Problems
"Relativistic Nuclear Physics and Quantum Chromodynamics"



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on High Energy Physics Problems
Relativistic Nuclear Physics & Quantum Chromodynamics

September 18 - 23, 2023, Dubna, Russia

Contribution ID: 77

Type: **not specified**

Beams collision monitoring and luminosity measurements in the interaction point at MPD/NICA

Friday, 22 September 2023 11:00 (20 minutes)

The detector for adjusting the convergence of beams at the point of interaction of the MPD (Multi-Purpose Detector) installation at the NICA collider (Nuclotron-based Ion Collider fAcility) is discussed. Simulation of the detector operation for Au+Au collisions at $\sqrt{(S_{NN})}=11 \text{ GeV}$ is calculated. It is shown that background events from scattering on residual gas give a negligible contribution to the detector's samples. The calibration procedure for determination absolute luminosity in the MPD interaction zone with the help of this detector is considered.

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Session Classification: Parallel: Project NICA/MPD/SPD at JINR