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Full-scale simulation of the MPD-NICA experimental setup and data analysis techniques

Tuesday 8 July 2025 09:30 (30 minutes)

The Multi-Purpose Detector (MPD) is one of the three experiments of the Nuclotron Ion Collider-fAcility (NICA) complex, which is currently under construction at the Joint Institute for Nuclear Research in Dubna. With collisions of heavy ions in the collider mode, the MPD will cover the energy range 4-11 GeV to scan the high baryon-density region of the QCD phase diagram. With expected statistics of 50-100 million events collected during the first run, MPD will be able to study a number of observables, including measurements of light hadrons and hypernuclei production, particle flow, correlations and fluctuations.

We will present selected results of the full-scale simulation of the MPD-NICA experimental setup for and discuss the data analysis techniques.

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