



New Trends in Nuclear Physics Detectors

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In the frame of the JINR scientific program on study of hot and dense baryonic matter a new accelerator complex Ion Collider facility (NICA) based on the Nuclotron-M is under realization. It will operate at a luminosity up to $10^{27} \text{ cm}^{-2} \text{ s}^{-1}$ for ions up to Au^{79+} . Two interaction points are foreseen at NICA for two detectors which will operate simultaneously. One of these detectors, the Multi-Purpose Detector (MPD), is optimized for investigations of heavy-ion collisions.

The Time-Projection Chamber (TPC) is the main tracking detector of the MPD central barrel. It is a well-known detector for 3-dimensional tracking and particle identification for high multiplicity events.

The conceptual layout of MPD, TPC design and its parameters, the current status of the readout based on multiwire proportional chamber (MWPC) and readout electronics based on SAMPA chip as well as the status of TPC subsystems are presented.

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