

Tracking System Performance of the BM@N Experiment

Tuesday, July 10, 2018 4:40 PM (20 minutes)

The Baryonic Matter at Nuclotron (BM@N) experiment represents the 1st phase of Nuclotron-based Ion Collider fAcility (NICA) Mega science project at the Joint Institute for Nuclear Research. It is a fixed target experiment built for studying nuclear matter in conditions of extreme density and temperature.

The tracking system of the BM@N experiment consists of three main detector systems: Multiwire Proportional Chambers (MWPC) situated before the magnet, Gas Electron Multipliers (GEM) placed inside the magnet and Drift Chambers (DC) placed after the magnet. These systems provide the reconstruction of charged particles' trajectories and their momentum in the magnetic field. This information is further used by time-of-flight detectors for the particle identification procedure.

The performance of the system is reviewed and the spatial resolutions along with efficiencies of the detectors are estimated using the data collected in the recent physical runs of the Nuclotron.

Primary author: VOYTISHIN, Nikolay (Joint Institute for Nuclear Research (RU))

Co-authors: ZINCHENKO, Alexander (JOINT INSTITUTE FOR NUCLEAR RESEARCH (JINR), DUBNA, RUSSIA); Mr POKATASHKIN, Gleb (LHEP JINR); RUFANOV, Igor (J); KAPISHIN, Mikhail (JINR, Dubna); LENIVENKO, Vasilisa (Joint Institute for Nuclear Research (RU)); Mrs VASENDINA, Veronika (Joint Institute for Nuclear Research (JINR)); PALCHIK, Vladimir (Joint Institute for Nuclear Research (RU))

Presenter: VOYTISHIN, Nikolay (Joint Institute for Nuclear Research (RU))

Session Classification: Posters

Track Classification: Track 2 –Offline computing