

Centrality determination in carbon beam data for BM@N experiment with Zero Degree Calorimeter (ZDC)

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The Baryonic Matter at Nuclotron (BM@N) is the fixed target experiment on NICA-Nuclotron acceleration complex in Dubna (JINR). The main goals of experimental data taking in 2016-2018 at the BM@N were measurements of strange and multistrange hyperon productions and searching for the hyper-nuclei in nucleus nucleus collisions. First data with carbon, argon and krypton beams have been taken at the BM@N with different targets. The BM@N experimental set-up consists of several beam detectors, analyzing magnet with precise tracking system and time-offlight detectors. In order to have possibility to measure reaction centrality the forward hadron Zero Degree Calorimeter (ZDC) has been installed downstream. Methods to determine nucleus-nucleus collision centrality with ZDC will be presented. The experimental data analysis for C+C reactions and event selection for different centrality classes will be discussed.

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