

Study of Λ - hyperon production in collisions of heavy ions with solid targets in the BM@N experiment

BM@N (Baryonic Matter at Nuclotron) is the first experiment collecting data at the accelerator complex of NICA-Nuclotron. The BM@N physics program is based on studies of highly compressed nuclear matter in heavy ion beams. The Nuclotron provides heavy ion beams in energy range 2.3 to 4.5 AGeV suitable for strange mesons and multi-strange hyperons production in nucleus-nucleus collisions close to the kinematic threshold.

Data were collected with a carbon beam at 4 and 4.5 AGeV kinetic energy and a set of nuclear fixed targets: Al, C, Cu, Pb.

We present the results on transverse momentum, rapidity spectra, and Λ -hyperon yields. The comparison is done with theoretical model predictions and the experimental C + C results at a beam energy of 2 AGeV (HADES, GSI).

Section

Heavy ion collisions at Intermediate and high energies

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