

# Study of $\Lambda$ - hyperon production in collisions of heavy ions with solid targets in the BM@N experiment

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BM@N (Baryonic Matter at Nuclotron) is the first experiment operating taking 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 with energies from 2.3 to 4.5 AGeV, which is suitable for studies of strange mesons and multi-strange hyperons produced in nucleus-nucleus collisions close to the kinematic threshold.

The first experimental run in 2017 used a carbon beam at 4 and 4.5 AGeV kinetic energy and a set of nuclear fixed targets: Al, C, Cu, Pb. This contribution describes a methodology to measure the production cross section and yields in the  $\Lambda \rightarrow p + \pi^-$  decay channel. The results are compared with theoretical models and experimental C + C data at a beam energy of 2 AGeV (HADES, GSI).

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