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Study of proton and light nuclei production in Ar-nucleus collisions in the BM@N experiment at NICA

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The BM@N (Baryonic Matter at Nuclotron) is a fixed-target detector for relativistic nuclear collisions at the NICA accelerator complex. The focus of the BM@N physics program is the study of the production of hadrons and light (hyper)nuclei in nucleus-nucleus interactions with energies up to 4A GeV. In this talk we present recent results on the production of protons, deuterons, and tritons in centrality selected argon-nucleus collisions at 3.2A GeV. Rapidity and transverse momentum distributions of p, d, t over a large phase space region will be shown. System size dependence of particle yields and ratios in Ar+A (A = C, Al, Cu, Sn, Pb) collisions will be discussed and tested against model predictions.

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