Directed flow of protons in Xe+CsI collisions at the beam kinetic energy of 3.8A GeV with BM@N

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In the collision of heavy ions hot and dense strongly interacting matter is produced. Anisotropy of the created in the collision particles is sensitive to the properties of the matter formed at the impact.

In the early 2023 Baryonic Matter at Nuclotron (BM@N) conducted its first physical run collecting more than 500 million collisions of Xe beam with the kinetic energy of 3.8A GeV on CsI target. We present the first results on the azimuthal anisotropic flow of protons for the recent physical run of BM@N.

We compare the measured directed flow of protons to the theoretical calculations of Monte-Carlo models as well as the measurements from other experiments.

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