

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

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In heavy-ion collisions at kinetic beam energies of several GeV per nucleon, a dense, strongly interacting matter is created, with properties similar to neutron star interiors. By studying experimental observables, the equation of state (EOS) of this matter, which relates pressure, temperature, and density, can be extracted. Collective flow patterns, particularly directed flow, are highly sensitive to the EOS. This work presents recent measurements of proton directed flow from the BM@N experiment at the NICA accelerator complex, for Xe+CsI collisions at 3.8A GeV. The new data are compared to existing results from other facilities and to theoretical predictions from the JAM model.

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