

Source velocity in collisions of 2.1 GeV protons with gold target

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One way of evaluating the degree of equilibration in reaction, as well as determine the average source velocity, is through invariant cross section analysis as a function of longitudinal and transverse velocity.

In the present work the source characteristics of multifragmentation are investigated for the p + Au collisions at 2.1 GeV. Beam of 2.1 GeV protons were obtained from the Dubna superconducting accelerator NUCLOTRON. Invariant cross sections of carbon fragments from target spectator were measured with the 4π device FAZA. It was found to a good approximation that the data for a given invariant cross section are isotropic; i.e., they can be described by a circle with fixed locus, corresponding to a single average source velocity. Mean source velocity of target spectator is 0.0032 ± 0.0003 in units of light speed. The research was supported by the Russian Foundation for Basic Research, Grant No. 19-02-00499.

The speaker is a student or young scientist

No

Section

1. Experimental and theoretical studies of nuclear reactions

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