

FRAGMENTATION OF CARBON IONS AT 0.3-2.0 GeV/n: COMPARISON WITH THE MODELS OF ION-ION INTERACTIONS

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Momentum distributions of hydrogen and helium isotopes from ¹²C fragmentation at 3.5° were measured in FRAGM experiment at ITEP TWA heavy ion accelerator on Be target. At energies 0.3, 0.6, 0.95 and 2.0 GeV/nucleon the momentum spectra of fragments span the region of fragmentation peak as well as the cumulative region. The differential cross sections cover 6 orders of its magnitude. The spectra were compared to the predictions of four ion-ion interaction models: LAQGSM03.03, SHIELD-HIT, QMD and BC. The data were also analyzed in the framework of thermodynamic approach where temperatures of nuclear matter in fragmentation and cumulative regions were obtained and the dependence on projectile energy was studied.