

TARGET DEPENDENCE OF THE ISOTOPE DISTRIBUTIONS IN HEAVY-ION REACTIONS AT FERMI ENERGIES

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Heavy-ion reactions at Fermi energies are a tool to produce new isotopes far from stability line. Previous experiments show that the production of neutron-rich isotopes is enhanced when the heavy target is used instead of the light one. In this report we compare isotope distributions calculated in transport-statistical approach BNV-SMM with the three frequently used models: empirical EPAX, geometrical-macroscopic Abrasion-Ablation and phenomenological HIPSE, and experimental data obtained in collisions of ^{18}O projectile on ^{181}Ta and ^9Be targets at 35 MeV per nucleon obtained at COMBAS set-up in FLNR, JINR. The experimental ratio of cross-sections obtained in the reactions on heavy ^{181}Ta and light ^9Be target in the collision with the same projectile and the same ratio obtained as model predictions is discussed. Some explanations of the observed features are presented.

Section

Experimental and theoretical studies of nuclear reactions

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