

Calculation of target dependence of the isotope distributions in heavy-ion reactions at energies from 35 to 140 MeV per nucleon in the modified transport-statistical model

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In heavy-ion reactions a lot of different isotopes are produced. Different models to predict their cross-sections exist. In this report the results of calculations in the modified transport-statistical approach of isotope distributions of forward-moving fragments for reactions with different projectiles from ^{18}O to ^{64}Ni with energies from 35 to 140 MeV per nucleon on two targets : ^{181}Ta and ^9Be , - are discussed. The target dependence (the ratios of isotope distributions for two targets) was studied. In our previous papers we studied this characteristic for reactions with light projectile ^{18}O . It was shown that the hyperbolic shape of their envelope can be explained by the different range of impact parameters involved in reactions on heavy and light targets. In this report the dependence of target ratio on the mass number of the projectile and its energy is studied. The results can be important for better prediction of isotope distributions in fragmentation reactions.

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