

## DEUTERONS INTERACTION WITH NUCLEI $^{208}\text{Pb}$ AT SUB-BARRIER ENERGIES

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The sub-barrier interaction of deuterons with  $^{208}\text{Pb}$  nuclei has been experimentally studied. Considerable difference of measured elastic cross sections from Rutherford ones and from theoretical calculations that take into account the processes of deuteron polarizability and breakup in the Coulomb field of  $^{208}\text{Pb}$  nucleus was revealed. Energy proton spectra from (d, p) reactions have been also analyzed. It was shown that the process of neutron transfer occurs with essentially bigger probability than Coulomb breakup of deuterons.

*Keywords:* deuteron elastic scattering, deuteron breakup, heavy nuclei, transfer reactions.