

CALCULATIONS OF THE DIRECT AND COMPOUND REACTIONS OF NEUTRONS WITH NUCLEI

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Abstract

We elaborated Fortran program for neutron elastic and inelastic scattering calculations in coupled channels optical model with excitation low levels even-even deformed nuclei. Collective states of nuclei are considered in the rigid axial and non-axial rotator model.

Characteristics of reactions running through the compound nucleus can be calculated using this program with or without accounting for the influence of the direct reactions on their.

Results of some calculations are compared with experiments. They clearly demonstrate the capabilities of the program.