

## New Results of the Investigation of the Angular Distribution of Fragments in Neutron-Induced Fission at Energies Up to 200 MeV

Angular distributions of fragments from the neutron-induced fission have been measured for a number of heavy target-nuclei in the energy range 1-200 MeV at the neutron time-of-flight spectrometer GNEIS [1] based on the 1-GeV proton synchrocyclotron of the NRC "Kurchatov Institute" - PNPI (Gatchina). As a result, the anisotropy of fission fragments  $W(0)/W(90)$  deduced from the experimental data on angular distributions for  $^{232}\text{Th}$ ,  $^{233}\text{U}$ ,  $^{235}\text{U}$ ,  $^{238}\text{U}$ ,  $^{239}\text{Pu}$ ,  $^{237}\text{Np}$ ,  $\text{natPb}$  and  $^{209}\text{Bi}$  [2-6] have been presented and discussed.

Recently, the measurements have been carried out for the neutron-induced fission of  $^{240}\text{Pu}$ . Main features of the experiment and first results are presented in this work. In the neutron energy range above 20 MeV, the energy dependence of the anisotropy of fission fragments was obtained for the first time. In lower neutron energy range the comparison with the results of other authors is performed and demonstrates a general agreement between them. However, unlike data given in literature, our data are obtained in a wide neutron energy range, from the reaction threshold up to the energy of second-chance fission that gives the possibility to perform theoretical description of the angular distribution of fission fragments and to obtain new information about the fission of  $^{240}\text{Pu}$ . This analysis is presented in the other report.

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