**MEASUREMENT OF FISSION CROSS SECTION AND ANISOTROPY OF ANGULAR DISTRIBYTIONS OF FISSION FRAGMENTS FROM NEUTRON-INDUCED FISSION**

**OF 236U IN INTERMEDIATE ENERGY RANGE 1-200 MEV**

A. S. Vorobyev1, A. M. Gagarski1, O. A. Shcherbakov1, L. A. Vaishnene1, A. L. Barabanov2, T. V. Kuz’mina3

*1B.P. Konstantinov Petersburg Nuclear Physics Institute of National Research Centre “Kurchatov Institute”, Gatchina, Russia; 2National Research Centre “Kurchatov Institute”, Moscow, Russia;3V.G. Khlopin Radium Institute, St.-Petersburg, Russia*

E-mail: vorobyev\_as@pnpi.nrcki.ru

The neutron-induced fission cross sections of 236U and 235U (used as a standard) have been measured simultaneously in the energy range 1-200 MeV at the neutron time-of-flight spectrometer GNEIS based on the 1-GeV proton synchrocyclotron of the NRC KI - PNPI (Gatchina) used as pulsed neutron source [1]. The fission fragments from neutron-induced fission of investigated nuclei were registered by two position sensitivemulti-wire proportional counters which allowed measuring not only the 236U to 235U fission cross section ratio but also the angular distributions of fission fragment at the same time.

The description of the original experimental set-up is presented, as well as the some principal details of experimental data processing. The anisotropy of fission fragments *W*(0º)/*W*(90º) deduced from the experimental data on angular distributions for 236Uare presented. A special attention is devoted to the neutron energy range above 20 MeV where the present data have been obtained for the first time in spite of the ever-growing interest to this field stimulated by the development of new nuclear technologies. This report presents the experimental part of the work, while the theoretical analysis of the data obtained are given in other report presented at this Conference. This work is a part of large program devoted to the investigations of neutron-induced fission at intermediate energies [2-5].

1. O. A. Shcherbakov *et al.*, Phys. Part. Nucl.49, 81 (2018).

2. A. S. Vorobyev *et al.,* JETP Lett. 102, 203 (2015).

3. A. S. Vorobyev *et al.*, Bull. Russ. Acad. Sci. Phys. 84, No. 10, 1245 (2020).

4. A. L. Barabanov *et al.*, Bull. Russ. Acad. Sci. Phys. 84, No. 4, 397 (2020).

5. A. S. Vorobyev *et al.*, JETP Lett. 112, 323 (2020).