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Neutron-Induced Fission Cross Section of 237Np up to 500 MeV

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The 237Np neutron-induced fission cross section was measured relative to the 235U(n, f) cross section in the energy range from 0.2 MeV to 500 MeV using the GNEIS neutron time-of-flight spectrometer and the pulsed neutron source based on the 1 GeV proton synchrocyclotron of the NRC KI - PNPI (Gatchina). The experimental setup consisted of two position-sensitive MWPC counters, which also allowed simultaneous measurement of the angular distributions of the fission fragments [1]. A brief description of the experimental set-up, data processing and the preliminary results obtained are presented.

1. A. S. Vorobyev et al. Phys. Rev. C 108, 014621 (2023).

Section

Experimental and theoretical studies of nuclear reactions

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