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# 237Np, 239Pu ACTINIDES IN THE NEUTRON FIELD OF THE "QUINTA"URANIUM TARGET

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The study of the production of actinides in the neutron field of the "Quinta"uranium target was carried out within the framework of the "Energy –Transmutation"project at the accelerators of JINR: Nuclotron and Phasotron.
The purpose of this work is to compare the yields of capture and fission reactions at various energies of the charged particles in a range from 1 to 20 GeV, determine their relation [3] for the residual nuclei in the 237Np sample and compare with the ratio in the 239Pu sample.

Fig. 1. The fission and capture yields for 237Np [2].

Fig. 2. Comparison of gamma spectra of 237Np samples, irradiated with the proton beam (A) and the secondary neutrons (B) at the distance of 200 mm from the proton beam in the "Quinta"uranium target.
The studies were carried out using HPGe detectors on the spectrometric complex at YASNAPP-LNP and LHEP JINR. The reliability of the studies is confirmed by the presence of the gamma transition with energy 984.5 keV and 1028.5 keV arising in the presence of the neutron capture with the 237Np nucleus in the "B"gamma spectra (Fig 2).
To interpret the results obtained in Figure 1, the report discusses the possibility of the cumulative data from the experiments on multifragmentation [1].

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2. S. Kilim, S.I. Tyutyunnikov, V.I. Stegailov et al., // NUKLEONIKA 63(1), 17-22 (2018).
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