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THE ENERGY DEPENDENCE MEASUREMENTS OF AVERAGE NUMBER OF PROMPT ,
NEUTRONS FROM NEUTRON-INDUCED FISSION OF 235U, 237Np AND 239Pu FROM 0,5 TO 12 MeV. The results of energy dependence measurements of average prompt neutrons multiplicity during neutron-induced fission of 235U, 237Np and 239Pu from 0,5 to 12 MeV are
presented. The measurements were carried out at linear electron accelerator of AH-Union Scientific Research Institute of Experimental Physics with time-of-flight techniques relative to
ν_p =3,756 for 252Cf. Fission acts were registered by parallel plate avalanche detector for fission fragments, neutron from fission - by the big liquid scintillator detector loaded with gadolinium.

THE CROSS-SECTION OF 153Eи(γ,п)152m2Eu - REACTION. The energy dependence of isomeric ratios of yields γ_m / γ_{m1} this reaction for states with Jπ/m1 = 0^- (T1/2 = 9.3h) and Jπ/m2 = 8^- (T1/2 =96m) was investigated on microtron bremssstralhung bunch in range 9-19 MeV. The production cross-section of 8^- isomeric state 152Eu was obtained.

THE EVALUATION OF 233U NEUTRON CROSS-SECTIONS IN THE THERMAL.. ENERGY RANGE.The analysis of the experimental data have been made and recommended self-consistent cross-sections in the energy range 10 -1 eV have been obtained.

THE PARAMETRIZATION OF NEUTRON CROSS-SECTION OF 233U IN THE ENERGY RANGE 1-100 eV. The parameters of the resolved resonances have been obtained. It's shown, that Adler—Adler parameters with smooth file give the best description of the all used experimental data. Group constants are given.

ON THE APPROXIMATION OF THE PROMPT FISSION NEUTRON SPECTRA. Prompt fission neutron spectra for 238*U(n, f)* reaction are approximated. The prefission emitted neutrons are accounted for. It is demonstrated that when energy of neutrons inducing fission is higher than 15 MeV, to describe the high energy tail

EXPERIMENTAL ERRORS OF NUCLEAR DATA DUE TO THE EFFICIENCY VARIATIONS OF THE NUCLEAR PARTICLE GAS COUNTERS. Previously unknown efficiency variations of the nuclear particles gas counters take place due to the presence of an electrical field and ionization in the counter volumes. Recommendations are given to avoid this variations. These recommendations tested by special neutron counters with $^{10}BF_3$ and ^{3}He gases and γ-counters used to measure neutron radiative cross sections.
MULTIPOLE MIXTURES IN y-TRANSITIONS OF 112Cd FROM THE (n, n'γ)-REACTION. γ-spectrum, angular distribution and linear polarization of y-quanta in the 112Cd(n;n'γ,)-reaction have been measured. Scheme of the 112Cd levels and y-transitions has been constructed, J^π characteristics of the levels have been determined, values of the multipole mixtures - δ for some γ-transitions have been found.

RELIABILITY VERIFICATION OF HETEROGENEOUS AND BILINEAR EFFECTS

EVALUATION IN ANALYZING OF REACTIVITY EXPERIMENTS ON A FAST CRITICAL ASSEMBLIES. A central reactivity worth of 10B, 12C, 233,238U, 239,240Pu has been measured at a БФС and КБР assemblies set. On the basic of three codes (TULPE, H2C, HEEPC) the corrections on the structure heterogeneity and on the absence of bilinear weighting in standard reactor programs has been evaluated. A good agreement of evaluated corrections for typical absorbers is stated. It is marked a better degree of description of a scatterers central reactivity worth by TULPE code. A necessity of taking into account of bilinear non-resonance corrections for scatterers is underlined.

MEASUREMENT OF AVERAGE CROSS-SECTION RATIOS IN BN-350 WITH THE METALLIC URANIUM SUB-ASSEMBLY. The measurement of average cross-section ratios in BN-350 with metallic uranium sub-assembly is considered. The experimental and calculation methods are presented. The experimental and calculated data are compared and conclusion concerning cross-section accuracy are given.