INVESTIGATION OF THE DEPENDANCE OF THE YIELD OF NEAR-ZERO-ENERGY ELECTRONS ON BETA-PARTICLE ENERGY

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The dependence of the yield of near-zero-energy electrons e_0 on β-particle energy is investigated in decays of ^{152}Eu and ^{154}Eu by the (e, γ)-, (β, γ)-, (βeγ)-concidence method. It is observed that the yield of e_0-electrons sharply increases at the energies of β-particles less than 200 keV and is constant at high energies. Since this dependence reflects the probability of a shake-off following the β-decay, the lift of the curve can be explained by the contribution of the direct collision mechanism of β-particles with the electrons of its own atom, as it is predicted by theory.