

Form factors of three-nucleon nuclei in the relativistic case

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A relativistic generalization of formulas for form factors of three-nucleon nuclei was obtained. The formulas for the form factors took into account the orbital moments of the nucleons inside the nuclei from 0 to 2, that is, the S P and D states. The form factors were calculated as functions of the transmitted momentum of the scattered electron up to 2 GeV. Moreover, for form factors nucleons used the models of the dipole fit, a model of a relativistic harmonic oscillator and a vector dominance model. The solutions of the Bethe –Salpeter –Faddeev equation were used as the amplitudes of the states of the nucleus used to calculate the form factors. At the same time, the potential of the nucleon-nucleon interaction is taken in a separable form using the Yamaguchi functions for form factors of potential.

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