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Contribution of nontrivial angular momenta in bound state energy of triton in Bethe-Salpeter-Faddeev approach.

Three nucleon system(triton) was considered. Relativistic properties of this system were investigated. For this relativistic generalization of Faddeev approach was used. As two particle T-matrix which contained in relativistic Faddeev equation we used solution of Bethe-Salpeter equation. So eventually we had Bethe-Salpeter-Faddeev(BSF) equation for describe three nucleon system. As potential of nucleon-nucleon(NN) interaction we used saparabel potential. Form factors of this potential taken in Yamaguchi-type function. Using of separable potential in particular allow to reduce integration on two variables into integration on one variable in BSF equation. Six states 1S0,3S1,3D1,3P0,3P1 and 1P1 with different angular momenta were considered. For this we made particle wave decomposition of BSF equation. System of 12 integral equations(for real and imaginary parts of amplitudes of 1S0,3S1,3D1,3P0,3P1 and 1P1 states) was solved with used iteration method. Bound state energy of triton and amplitudes of S,P and D states was found. Amplitudes used for calculation electric and magnetic form factors of triton.

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