

## Relativistic three-nucleon nuclei in the Bethe-Salpeter-Faddeev approach

*Friday, 26 October 2018 16:05 (15)*

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 separable 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  $1S_0, 3S_1, 3D_1, 3P_0, 3P_1$  and  $1P_1$  with different angular momenta were considered. For this we made partial wave decomposition of BSF equation. System of 12 integral equations(for real and imaginary parts of amplitudes of  $1S_0, 3S_1, 3D_1, 3P_0, 3P_1$  and  $1P_1$  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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**Session Classification :** Nuclear physics

**Track Classification :** Nuclear physics