RELATIVISTIC EQUATION FOR FOUR-NUCLEON SYSTEM

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The paper generalizes the four-particle integral Faddeev-Yakubovsky equation to the relativistic case. The obtanied system of integral equations is solved by the iteration method and the binding energy and amplitudes of states of the helium-4 nucleus are found. The rank- one separable Yamaguchi potential is used as the NN interaction potential. In the calculations the only states with zero orbital momentum are considered - S states. The results of the calculation are compared with non-relativistic calculations and experimental value.