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Relativistic effects in the 3N continuum HENRYK WITALA, JACEK GOLAK, Institute of Physics, Jagiellonian University, PL-30059 Kraków, Poland, WALTER GLOECKLE, Institut fuer theoretische Physik II, Ruhr-Universitaet Bochum, D-44780 Bochum, Germany, HIROYUKI KAMADA, Department of Physics, Faculty of Engineering, Kyushu Institute of Technology, Kitakyushu 804-8550, Japan — We solved the three-nucleon (3N) Faddeev equation including relativistic features. Those features are relativistic kinematics, boost effects and Wigner spin rotations. As dynamical input a relativistic nucleon-nucleon interaction exactly on-shell equivalent to the AV18 nucleon-nucleon potential has been used. The effects of Wigner rotations for elastic scattering observables were found to be small. The boost effects are significant at higher energies. They diminish the transition matrix elements at higher energies and lead in spite of the increased relativistic phase-space factor as compared to the nonrelativistic one to rather small effects in the cross section, which are mostly restricted to the backward angles.

> Henryk Witala Institute of Physics, Jagiellonian University, PL-30059 Kraków, Poland

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