

Abstract Submitted
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Three-nucleon force effects in three-nucleon continuum states

SOUICHI ISHIKAWA, Hosei University — The introduction of the two-pion exchange three-nucleon force (2π E-3NF) into nuclear Hamiltonian is known to be unsuccessful in explaining the existing discrepancies between calculations with two-nucleon forces and experimental data for some polarization observables, such as $A_y(\theta)$ and $T_{21}(\theta)$ in nucleon-deuteron scattering. A phenomenological 3NF to reproduce such observables at a low energy is examined for those at higher energies. For proton-deuteron scattering, effects of the long-range proton-proton Coulomb potential are properly included by solving a Coulomb-modified Faddeev integral equation in coordinate space. Also studies of searching for realistic mechanisms to produce the same effects as the phenomenological 3NF will be reported.

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