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Three-nucleon tensor force effects in nucleon-deuteron scattering. SOUICHI ISHIKAWA, Hosei University — The introduction of three-nucleon (3N) forces arising from the exchange of two pions among three nucleons (2PE-3NF) is known to get rid of the discrepancies between experimental data and only twonucleon force (2NF) calculations for the 3N binding energies and nucleon-deuteron (ND) differential cross sections. On the other hand, we have shown that tensor components of the 2PE-3NF give undesirable contributions to tensor analyzing powers (TAP's) in ND elastic scattering at energies below the three-body breakup threshold. We made a phenomenological 3NF that reproduces the TAP's by inversing the sign of a tensor component in a 2PE-3NF simulated 3N potential, which consists of scalar and tensor forces in spin space with Gaussian form factors. In this work, we examine 3NF effects on ND scattering observables at energies above the three-body breakup threshold. Our calculations show that the tensor-inversed 2PE-3NF model is also successful in reproducing some polarization observables at higher energies, which are not reproduced by 2NF and 2NF + 2PE-3NF.

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