

Abstract Submitted
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Neutron-deuteron scattering and the three-nucleon force M. CHTANGEEV, T. AKDOGAN, W.A. FRANKLIN, J.L. MATTHEWS, MIT, M.A. KOVASH, U. Kentucky, P.A.M. GRAM, S.A. WENDER, LANL, M. YULY, Houghton Coll. — Differential cross sections for neutron-deuteron elastic scattering were measured at six angles between 65 and 130 degrees (center-of-mass) for incident neutron energies in the range 140 to 240 MeV. A liquid deuterium target was exposed to the pulsed neutron beam provided by the LANSCE/WNR facility at the Los Alamos National Laboratory. Scattered neutrons and recoil deuterons were observed in coincidence using time-of-flight techniques and an array of plastic and CsI scintillation detectors. With liquid hydrogen in the target, elastic neutron-proton scattering cross sections were measured to aid in normalization of the neutron-deuteron data. The results will be compared with theoretical predictions including three-nucleon forces and with the results of previous measurements.

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