

Abstract Submitted
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Capabilities of the Recent Absolute Total np and pp Cross Section Determinations to Predict Experimental Observables A.B. LAPTEV, R.C. HAIGHT, LANL, R.A. ARNDT, W.J. BRISCOE, M.W. PARIS, I.I. STRAKOVSKY, R.L. WORKMAN, The George Washington University — The absolute total cross sections for np and pp scattering below 1000 MeV are determined based on partial-wave analyses (PWAs) of nucleon-nucleon scattering data. These cross sections are compared with most recent ENDF/B and JENDL data files, and the Nijmegen PWA. Systematic deviations from the ENDF/B and JENDL evaluations are found to exist in the low-energy region. Comparison of the np evaluation with the result of most recent np total cross section measurement made at LANL in the energy range from 9 to 500 MeV will be discussed. This measurement was not used in the evaluation database. A comparison was done to check a quality of evaluation and its prediction capabilities. Excellent agreement was found between the new experimental data and our PWA prediction.

Alexander Laptev
LANL

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