Overview of Measurements Related to Three-Nucleon Force Effects

WERNER TORNOW, Department of Physics/TUNL, Duke University

A review of specific three-nucleon and four-nucleon experiments will be given. The results of these measurements, when compared to state-of-the-art theoretical calculations, both with and without three-nucleon forces (3NFs), are the basis of our understanding that 3NFs are not only needed to correctly bind nuclear systems, but also to describe scattering states of few-nucleon systems. Recommendations will be given for obtaining improved or new experimental data to produce the database needed to put 3NFs in the continuum on a solid experimental ground.

1Supported in part by U.S. DoE, Office of Nuclear Physics under Grant No. DE-FG02-97ER41033