

Abstract for an Invited Paper
for the HAW09 Meeting of
The American Physical Society

The Nucleon Spin Program at Jefferson Lab

XIAOCHAO ZHENG, University of Virginia

Spin structure of the nucleon has been one of the key research topics in nuclear science during the past three decades. Recent precision spin structure data from Jefferson Lab have significantly advanced our knowledge of nucleon structure in the valence quark (high- x) region and improved our understanding of higher-twist effects, spin sum rules, and quark-hadron duality. First, results of spin sum rules and polarizabilities in the low to intermediate Q^2 region will be presented and compared with theoretical calculations such as those based on Chiral Perturbation Theory (ChPT). Next, precision measurements of the spin asymmetry, A_1 , in the high- x region will be presented. They provide crucial input for global fits of polarized parton distribution functions. Finally, plans for the nucleon spin program at the upgraded 12 GeV JLab will be presented.