

Abstract Submitted
for the SES06 Meeting of
The American Physical Society

Extracting nucleon strange and anapole form factors from world data ROGER CARLINI, ROSS YOUNG, ANTHONY THOMAS, Jefferson Lab., Newport News, Va., JULIE ROCHE, Ohio University, Athens, Ohio — The complete world set of parity violating electron scattering data up to $Q^2 \sim 0.3 \text{ GeV}^2$ is analyzed. We extract the current experimental determination of the strange electric and magnetic form factors of the proton, as well as the weak axial form factors of the proton and neutron, at $Q^2 = 0.1 \text{ GeV}^2$. Within experimental uncertainties, we find the strange form factors are consistent with zero, as are the anapole contributions to the axial form factors. Nevertheless, the correlations between the strange and anapole contributions suggest that there is only a small probability that these form factors all vanish simultaneously.

Roger Carlini
Jefferson Laboratory

Date submitted: 18 Aug 2006

Electronic form version 1.4