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GEn Extraction at $Q^2 = 1 \text{ (GeV/c)}^2$ from Polarized $^3\text{He}(e,e')$ Measurements GE JIN, University of Virginia, JEFFERSON LAB HALL A COLLABORATION — The neutron electric form factor, GEn, was extracted for the first time at $Q^2 = 1 \text{ (GeV/c)}^2$ from polarized $^3\text{He}(e,e')$ measurements in Hall A at Jefferson Lab. By getting the ratio of longitudinal and transverse quasi-elastic $^3\text{He}(e,e')$ scattering asymmetry, the electron and magnetic contributions can be separated. The proton and neutron contributions to the ^3He quasi-elastic responses were calculated in PWIA by Salme and the neutron electric form factor can be extracted. This inclusive scattering method becomes feasible for the first time due to the falloff of the other form factors at high Q^2 while GEn remains almost constant. Approximately 20% uncertainty was achieved in the measurement largely contributed by statistics from 3 days of data-taking. All aspects of the measurement will be discussed including theoretical model, experiment and analysis details.

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