There is currently enormous interest in the determination of the strangeness content of the nucleon which is crucial in the understanding of quantum chromodynamics (QCD) in the non-perturbative regime. In this regime, the QCD coupling constant is large and in addition to the valence quarks(up and down quarks) there is a sea of gluons and q^{q} pairs that plays an important role at these distance scales. Because the strange quark mass is comparable to the QCD mass scale ΛQCD , it is reasonable to assume that it might have non-negligible contributions to the nucleon properties. The parity-violating (PV) electron scattering in the electron-nucleon elastic scattering offers a new opportunity to study the contribution of the strange quarks to the electroweak structure of the nucleon. This work shows the results of parity-violating asymmetry APV for longitudinally polarized electrons from both hydrogen and helium cryogenic targets, at small angles. The asymmetry for hydrogen is a function of a linear combination of G^{s}_{E} and G^{s}_{M} the strange quark contributions to the electric and magnetic form factors of the nucleon respectively, and that for helium is a function of solely of G^{s}he combination of the two experimental results therefore allow G^{s}_{E} and G^{s}_{M} to be separately determined.

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