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What if G_E^s is Zero? Implications for $G_M^s$and G_A^s JOHN SCHAUB, STEPHEN PATE, Physics Department, New Mexico State University — Because strange quarks are the lightest quarks present in nucleons via only vacuum fluctuations, studying their activities in nucleons gives us insight to the vacuum's effects on nucleon properties. These contributions can be accessed through electroweak interactions—in particular through parity-violating eN and νN elastic scattering. Recent data from parity-violating eN elastic scattering (HAPPEX, PVA4) suggests that the strange contribution to the proton electric form factor, G_E^s, may be nearly zero in the range $0 < \mathrm{Q}^2 < 1$ GeV^2. We assume that G_E^s is small and use existing νN data to explore the consequences for G_M^s and G_A^s.

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