HAPPEX-III results: measurement of nucleon strange form factors at high $Q^2$

RUPESH SILWAL, University of Virginia, HAPPEX-III COLLABORATION — The bare mass of the three valence quarks only makes $\sim 1\%$ of the proton mass, the rest is gluons and a sea of quarks and anti-quarks dominated by the light up, down and strange stark flavors. From a naive interpretation of the quark model, one might expect that the electromagnetic form factors are determined only by the distribution of valence quarks. But, existing data suggesting a non-zero strange quark contribution to these form factors at high $Q^2$ has been a topic of great interest. Recent results from HAPPEX-III collaboration have significantly clarified the role of intrinsic strangeness in the nucleon vector form factors; these results will be presented and discussed.