

Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

First Precision Measurements of EM Form Factors of Pions, Kaons, Protons, and Hyperons, and Evidence for Diquark Correlations
KAMAL SETH, Northwestern University — Precision measurements of electromagnetic form factors of pion, kaon, proton, and charged and neutral hyperons at large timelike momentum transfers of 14 and 17 GeV² have been made. The measurements for lambda, sigma zero, sigma plus, cascade zero, cascade minus, and omega minus are the world's first, and their systematics is studied. The most dramatic result consists of the nearly factor two difference between the form factors of the lambda and sigma zero hyperons, which have the same uds quark construct, but different isospin. The result is explained in terms of the diquark correlations anticipated by Jaffe and Wilczek.

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Date submitted: 17 Jun 2014

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