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Nucleon Form Factor Measurements at Jefferson Lab: results and future experiments

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The electromagnetic form factors of the nucleon are essential for our understanding of the structure of the nucleon. Precision measurements of nucleon form factors constitute a key part of the Jefferson Lab experimental program. The proton Radius experiment (pRad), the first experiment to be completed following the 12 GeV beam upgrade of Jefferson Lab, measured the proton form factor down to very low values of Q^2 for a high precision extraction of the proton charge radius. The results from this experiment will be vital for resolving the proton charge radius puzzle. The 12 GeV beam upgrade of Jefferson Lab combined with new spectrometers such as Super Bigbite Spectrometer (SBS), make possible a new generation of experiments to measure nucleon form factors with high precision at high Q^2 values. These experiments will allow high resolution determination of the nucleon distribution of charge and magnetization as well as insight into the behavior of the u- and d-quark form factors up to high momentum transfer. In this presentation I will review the achievements of the nucleon form factor program from the Jefferson Lab 6-GeV era as well as the future form factor experiments with the 12 GeV beam.

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