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**What electron (and muon) scattering tell us about the proton radius<sup>1</sup>**

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The nature of QCD is such that quarks cannot be observed in isolation, but only in tightly bound states. Because of this, the proton plays an important dual role as a basic building block of matter and the most accessible bound state of QCD. Elastic electron-proton scattering is one of the oldest and most widely used tools for studying the spatial structure of the proton, with the rms charge radius taken to be the slope of the form factor at  $Q^2 = 0$ . However, recent extractions of the radius from the Lamb shift in muonic hydrogen are significantly smaller than extractions from both earlier and more recent electron scattering data. The extraction of the proton charge and magnetization radii requires precise data taken at very low energies, a detailed understanding of two-photon exchange corrections, and a careful analysis of the uncertainty in extracting the slope at  $Q^2 = 0$  from data at finite  $Q^2$ . I will summarize the state of existing extractions of the radius and present plans for future measurements which will address some of the issues mentioned above and improve the scattering-based extractions of the radius.

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