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What's the matter in the Proton? ELIZABETH BEISE, University of Maryland

It has been over 70 years since the Nobel Prize was awarded to Otto Stern for the discovery that the proton has an anomalously large magnetic moment, nearly three times what one expects from a spin-1/2 object with no internal structure. This was one of the first hints of the spatial extent of protons and neutrons that make up nearly all of the visible matter in the universe. Not long after this discovery, this interior landscape began to be explored in detail through the use of electron scattering, a precision microscope with which one can peer deep inside the nucleon. Recent experiments, using polarized beams, light polarized targets, recoil detection and complementary views via the weak interaction are now changing our traditional textbook view of the nucleon and its lowest-lying excited states. This talk will be a review of the recent experimental results and a summary of near future opportunities.