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How do elementary particles come to possess their property of charge? SCOTT GORDON, University of Central Florida — The standard model tells us about the fundamental particles and details of how they interact through the fundamental forces; as stated on The <u>CERN</u> website, "although the Standard Model accurately describes the phenomena within its domain, it is still incomplete. Perhaps it is only a part of a bigger picture that includes new physics hidden deep in the subatomic world or in the dark recesses of the universe. New information from experiments at the LHC will help us to find more of these missing pieces." But what if it is not possible for any CERN experiment (or elsewhere) to expose the missing pieces? Wikipedia states that "elementary particles are particles with no measurable internal structure". With no measurable internal structure, there is no experimental way to gain knowledge into the internal structure of elementary particles. This would mean that it is not possible using our current scientific tools of investigation to find a mechanism that explains how elementary particles comes to possess their properties, including the property of charge. Hierarchy of Energy theory is a new theory that models the internal structure of the up quark and electron which is in total agreement with known physics.

> Scott Gordon University of Central Florida

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