

Abstract Submitted  
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**Hadron Confinement Theory** CARL CASE, Case Consulting — A theory is presented based on QCD and Dirac equation solutions with well-defined energy, momentum, and angular momentum for quarks and gluons. Dynamic chiral symmetry breaking occurs when massless quarks and gluons have identical velocities resulting in color electric fields being cancelled by countervailing color magnetic fields. Massless quarks are entrapped in magnetic containment bottles, while massless gluons are entrapped in quantized bundles of color magnetic flux. Each entwined massless quark-gluon combination behaves as a composite particle that acquires mass as inertial magnetic forces reduce its velocity below the speed of light. The quark-gluon composite particles are identified with the point-like quarks observed in collider experiments. Each quark flavor is associated with one of the degenerate ground states associated with the quantized color magnetic flux bundles and their associated winding numbers. The *up*, *charm* and *top* quark masses obey a specific scaling law as do the *down*, *strange* and *bottom* quarks. The six quark flavors obey a single scaling law for  $\beta$ , the speed of each flavor relative to speed of light. Calculations of the hadron mass spectra are presented. The theory provides an explanation for the proton spin crisis.

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