

Abstract Submitted
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Confinement Theory for Hadrons CARL CASE, SPARTA, Inc. — A dynamic relationship is proposed that leads to chiral symmetry breaking for massless quarks and in cancellation of the color electric field leaving only color magnetic fields acting on hadron quarks. Color superconducting states result giving rise to a color Meissner effect. Quarks are trapped within the color magnetic fields and quantized color magnetic flux bundles are trapped by circulating quarks creating quark-gluon composites that gain mass. The flux quantization introduces a topological defect that generates collective quark-gluon composite energy states corresponding to the various quark flavors. Topological winding numbers serve as quantum numbers for the quark flavors. Up and Down states correspond to a winding number of 1. Strange/ Charm and Bottom/ Top states correspond respectively to winding numbers of 2 and 3 respectively. The Dirac equation is solved using the Hartree self-consistent field method and the Born approximation. Resulting mass spectra calculations are presented for 30 baryons, 20 mesons and for the proton-neutron mass difference. .

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