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# Field-Strength Descriptions for a Confined System of SU(2) Charges

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The existence of a mechanism with QCD to confine quarks and gluons to the interior of hadrons has long been accepted empirically. To explore the properties required for this confinement we present a field-strength description for a simple extended system of SU(2) charges with spherical symmetry and then impose confining boundary conditions on the time-independent Yang-Mills-Maxwell equations. Nontrivial solutions to these equations necessarily describe a dual topological insulator with a shell of topological charge between the interior and exterior volumes. The dimensional reduction implicit in the characterizations of spherically symmetric SU(2) can be extended to SU(3).

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