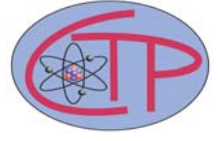




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Confined Monopoles in Supersymmetric QCD

Presented by:

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$T > T_c$

Abstract

$T < T_c$

We study different (quantum) aspects of monopoles in the Higgs phase which are confined by non-abelian vortices. This represents a non-abelian generalization of the Meissner effect in type II superconductors. The electric-magnetic dual of such a Meissner effect is generally believed to be responsible for quark confinement. We compute in particular the perturbative quantum corrections for (multiple) confined monopoles and identify an anomalous contribution in the magnetic charge. An essential ingredient is a new index theorem. We also show that the quantum spectrum match the quantum energies of kink-solitons in two-dimensional CP^n sigma models. This explains the early successes of these models in mimicking QCD phenomena.