

Confinement Criteria and the Higgs Mechanism

Monday, March 12, 2018 2:30 PM (30 minutes)

Although color neutrality of the QCD spectrum is the historical definition of confinement, we know that a color neutral particle spectrum is also a feature of gauge-Higgs theories in the Higgs regime, and this means that such theories are also “confining,” at least by the historical definition. In this talk I will suggest that a confinement property stronger than color neutrality, which generalizes Wilson’s area-law criterion in a pure gauge theory, holds in QCD and in the QCD-like regime of gauge-Higgs theories. I will also address the question of what symmetry is actually broken in the Brout-Englert-Higgs mechanism.

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