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Type: **Poster**

Deconfinement to Confinement as PT phase transition

We consider $SU(N)$ QCD in a new quadratic gauge which highlights certain characteristic of the theory in the non-perturbative sector. By considering natural hermiticity property of the ghost fields we cast this model as non-Hermitian but symmetric under combined Parity (P) and Time reversal (T) transformations. We explicitly study the PT phase transition in this model. This is very first such study in the non-Hermitian gauge theory. The ghost fields condensate which give rise to spontaneous breaking of PT symmetry. This leads to realize the transition from deconfined phase to confined phase as a PT phase transition in this system. The hidden C-symmetry in this system is identified as inner automorphism in this theory. Explicit representation is constructed for the C-symmetry.

Choix de session parallèle

1.3 Physique nucléaire: physique hadronique et QCD

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Classification de Session: Séance Poster