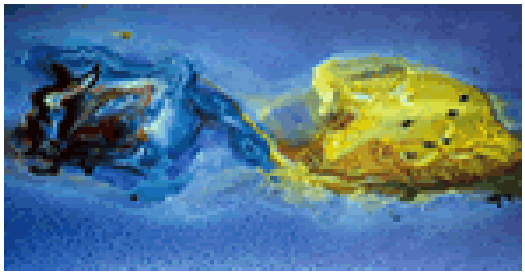

Contribution ID: **196** Type: **Talk**

Correct way to extract the dominant part of the Wilson loop in higher representations

Sunday 5 August 2018 15:00 (20 minutes)

The Abelian dominance of the string tension for the fundamental sources in MA gauge was shown in the lattice simulations. However, it is known that, for higher representations, the naive "Abelian" Wilson loop, which is defined by using the diagonal part of the gauge field, does not reproduce the correct behavior. To solve this problem, for an arbitrary representation of an arbitrary gauge group, we redefine the "Abelian" Wilson loop through the non-Abelian Stokes theorem. By using this redefined operator, we check the "Abelian" dominance for sources in the adjoint representation and the six-dimensional representation of SU(3) gauge group in lattice simulations.

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Session Classification: Vacuum structure and confinement

Track Classification: A: Vacuum structure and confinement