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## Magnetic monopole and confinement/deconfinement phase transition in SU(3) Yang-Mills theory

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We have proposed the non-Abelian dual super conductivity in SU(3) Yang-Mills (YM) theory for the mechanism of quark confinement, and by using the proposed gauge link decomposition to extract magnetic monopole in the gauge invariant way we presented the evidences in lattice conferences.

In this talk, we focus on the dual Meissner effects in view of the magnetic monopole in SU(3) Yang-Mills theory. We measure the chromo-electric and chromo-magnetic flux due to a pair of quark and antiquark source at finite temperature. Then, we measure the correlation function of Polyakov loops and Polyakov loops for various temperatures, and investigate chromo-magnetic monopole current induced by chromo-magnetic flux in both confinement and deconfinement phase. We will discuss the role of the chromo-magnetic monopole in confinement/deconfinement phase transition.

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