Contribution ID: **61**   Type: **Talk**

Parity doubling in two-color and two-flavor gauge theory at high temperature

Wednesday 3 August 2016 15:10 (25 minutes)

Recently the two-color gauge theory with two flavors of fundamental fermions has received considerable attention in BSM model building, as it provides a minimal template for a composite Higgs theory that includes dark matter candidates. In this work, we consider the two-color model with two flavors of Wilson fermions at non-zero temperature. For a more reliable investigation of meson correlation functions at high temperature, we perform simulations on anisotropic lattices with a target anisotropic factor of a_s/a_t=6.3. The tuning of bare parameters was carried out using the pseudo-scalar dispersion relation and Wilson loop ratios. We present our preliminary results for the identification of parity doubling from the temporal and spacial correlation functions of vector and axial-vector mesons.

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Session Classification: Wednesday PM

Track Classification: Strongly interacting Dark Matter