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Dyons and Roberge - Weiss transition in lattice QCD

Tuesday, 30 August 2016 18:00 (30 minutes)

We study $N_f = 2$ lattice QCD with improved Wilson fermions at imaginary chemical potential μ_I. Simulations are made in the deconfinement phase at few values of μ_I/T to study Roberge-Weiss phase transitions at $\mu_I/T = \pm\pi/3$ and π. We measure spectrum of overlap Dirac operator in background of equilibrium configurations with variable μ_I/T. Numerical evidence is presented to show that Roberge-Weiss transitions are related to changes in the spectrum gap. We suggest explanation of our numerical results in terms of dyons.

Summary

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