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| Title: | Thermal phase structure of a supersymmetric matrix model |
| Authors: | Joseph, A. (/jspui/browse?type=author&value=Joseph%2C+A.) |
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| Abstract: | We present initial results from ongoing lattice investigations into the thermal phase structure of the Berenstein--Maldacena--Nastase deformation of maximally supersymmetric Yang--Mills quantum mechanics. The phase diagram of the theory depends on both the temperature T and the deformation parameter μ, through the dimensionless ratios T/μ and g≡λ/μ3 with λ the 't Hooft coupling. Considering couplings g that span three orders of magnitude, we reproduce the weak-coupling perturbative prediction for the deconfinement T/μ and approach recent large-N dual supergravity analyses in the strong-coupling limit. We are carrying out calculations with lattice sizes up to Nτ=24 and numbers of colors up to N=16, to allow initial checks of the large-N continuum limit. |
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