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# Low temperature study of QCD at finite chemical potential using Random Matrix Theory

We study an  $SU(N)$  matrix model with a Gross-Witten-Wadia weight function and a low-temperature fermionic term at finite chemical potential. We provide exact results for several physical quantities in the large  $N$  limit in the confined phase, such as (density of eigenvalues), free energy, and winding Wilson loops. As expected, this model exhibits the sign problem.

## Field of contribution

Theory

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