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Investigation of the topological properties of the CP[^](N-1) model

Thursday, 14 December 2017 18:00 (20 minutes)

We measured the theta-dependence of the vacuum energy density of the $CP^{(N-1)}$ model up to O(theta^6) for N = 15, 21, 26 and 31 using Monte Carlo simulations.

We then extrapolated the large-N limit of the topological susceptibility chi and of the higher-order coefficients b_2 and b_4 and compared it with the analytic results. In particular, we compared the leading term of the 1/N expansion of these observables and, for the topological susceptibility, the next-to-leading-order term too.

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