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Tensor network simulations at nonzero chemical potential and temperature

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We present results of tensor network simulations of the three-dimensional $O(2)$ model at nonzero chemical potential and temperature, which were computed using the higher order tensor renormalization group method. This also includes some enhancements to the method which take care of anisotropic tensors. Some special care was also taken to reduce the systematic error on the computation of the observables.

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