

Assignment 3

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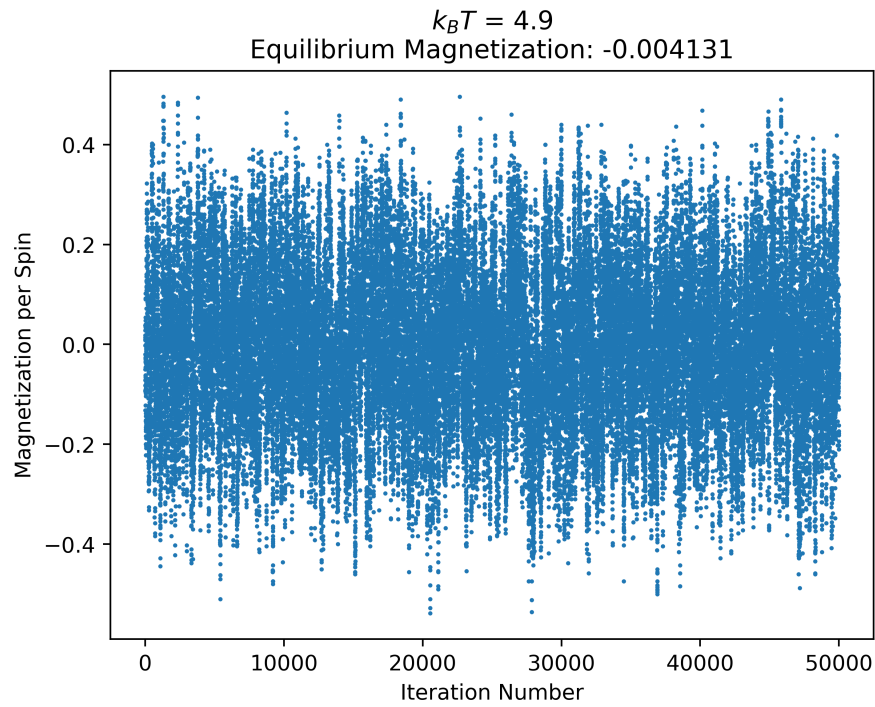
1

The total magnetic moment will be $-L^3$ or -8000 .

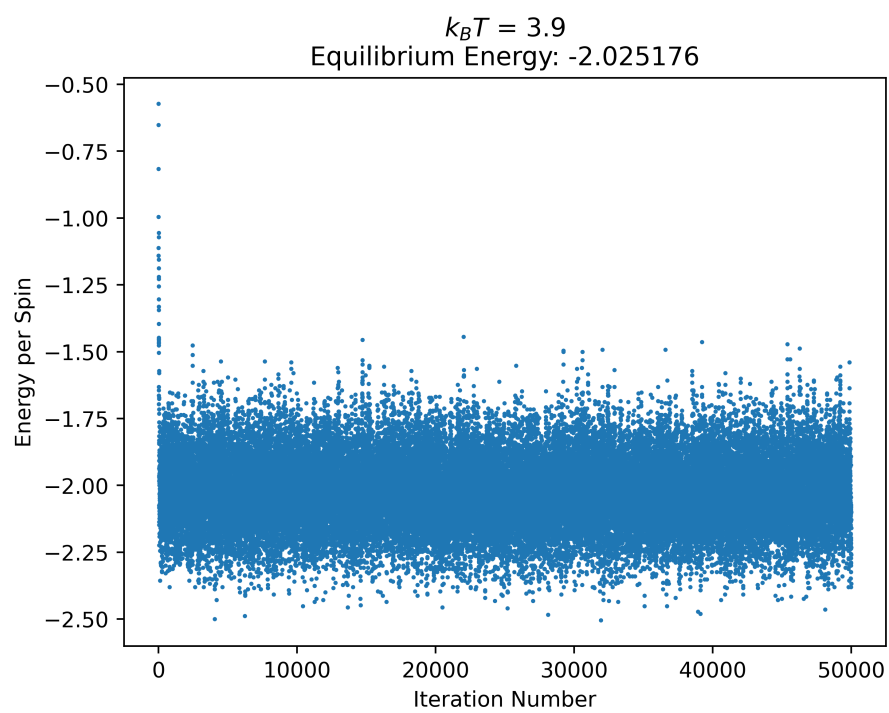
2

The number of interactions is 4 per spin and thus $4L^3/2 = 2L^3$. Since all interactions will contribute to $-J$ interaction energy, the total energy will be $-2JL^3 = -2000$.

3



4



5

