

On magnetic models in wavefunction ensembles

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Abstract

We recasted thermodynamics in terms of spin-wavefunction ensembles, rather than classical particle configurations or “found” values of Copenhagen Quantum Mechanics. This asks a completely new mathematical treatment. In these ensembles magnetic phase transitions are possible if and only if we consider indistinguishable particles together with a macroscopic non-linearity which blocks macroscopic dispersion (i.e. macroscopic superpositions) by energy conservation (preserving norm and energy). This non-linearity becomes significant only at the macroscopic level, and hence is of possible interest for the Measurement Problem. The overall magnetic field seems the right description, what will distinguish one model from another are the symmetry of the wavefunction and the spin values. Results available in [1].

References

- [1] L. De Carlo, W. David Wick, arXiv:2208.07688 (2023).



Figure 1: Insert caption to place caption below figure (Century Gothic 10)



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Figure 2: Insert caption to place caption below figure (Century Gothic 10)

Figures