

Nonuniform upper estimates of the density of states in dimension one

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Abstract

We consider the density of states (DOS) of one-dimensional discrete random Schrödinger operators with a uniformly distributed random potential. The Wegner estimates are uniform estimates of the DOS. They are expected to be inadequate close to the boundary of the spectrum, where Lifshitz behavior should occur. We prove a result interpolating between the Wegner and the Lifshitz regime.