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Using Bohmian trajectories in gravitational reduction of the wave function

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Abstract

In this research, we study the gravitational reduction of the wave function, which has been investigated in standard quantum mechanics. As a new look at the problem, we investigate the reduction of the wave function by studying the dynamics of the particle motion, which can be defined in the quantum Bohmian framework. In this regard, quantities such as the critical mass of reduction, reduction time, and reduction temperature, which are similar to the Unruh temperature, are systematically obtained.

Keywords: Bohmian quantum mechanics, quantum potential, gravitational reduction of the wave function, wave function reduction

For full article, refer to the Persian section