Maurice de Gosson

back to namelist

Maurice de Gosson
University of Vienna, AT

Short-Time Behaviour of Bohmian Trajectories

We begin by giving rigorous expressions for the short-time action; this gives us the opportunity to briefly discuss the derivation of the Feynman integral based on incorrect expressions. We use our short-time estimates to derive an accurate expression modulo ?t² for the quantum propagator. This allows us to show that the quantum potential is negligible modulo ?t² for a point source. An immediate consequence is that the quantum motion is classical for short times. It follows that a continuously observed quantum trajectory is classical, which is a version of the quantum Zeno effect.

Watch presentation video

Download presentation s pdf (159KB)

Download abstract pdf