

CHAPTER OVERVIEW

11: Introduction to path integrals in quantum mechanics and quantum statistical mechanics

11.1: Discretized and Continuous Path Integrals

11.1.1: Derivation of the Discretized Path Integral

11.1.2: Doing the Path Integral - the Free Particle

11.1.3: Dominant Paths in the Propagator and Density Matrix

11.1.4: The Continuous Limit

11.2: Calculation of observables from path integrals

11.2.1: Expectation values of observables

11.2.2: Path integrals for N-particle systems

11.2.3: Path integral molecular dynamics (optional reading)

11.2.4: Thermodynamics from path integrals

11.3: Expansion about the classical path and stationary phase

11.3.1: The harmonic Oscillator - Expansion about the Classical Path

11.3.2: The Stationary Phase Approximation

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