

Classical Mechanics Goldstein Solutions Chapter 8

Goldstein Classical Mechanics Notes

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May 30, 2014

1 Chapter 8: Elementary Principles

8.1. Hamilton's Principle of Least Action

Consider a particle of mass m moving in a potential $V(x)$. The Lagrangian is $L = T - V$.

Hamilton's principle states that the path taken by the particle is such that the action S is stationary.

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The action S is defined as $S = \int_{t_1}^{t_2} L dt$.

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