

## CHAPTER OVERVIEW

### 8: A New Way to Write the Action Integral

Following Landau, we'll first find how the action integral responds to incremental changes in the *endpoint* coordinates and times, then use the result to write the action integral itself in a new, more intuitive way. This new formulation shows very directly the link to quantum mechanics, and variation of the action in this form gives Hamilton's equations immediately.

[8.1: Function of Endpoint Position](#)

[8.2: Function of Endpoint Time](#)

[8.3: Varying Both Ends](#)

[8.4: Another Way of Writing the Action Integral](#)

[8.5: How this Classical Action Relates to Phase in Quantum Mechanics](#)

[8.6: Hamilton's Equations from Action Minimization](#)

[8.7: How Can  \$p\$ ,  \$q\$  Really Be Independent Variables?](#)

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