

CHAPTER OVERVIEW

4: Some Basic Applications of Statistical Thermodynamics

- [4.1: Interpreting the Partition Function](#)
- [4.2: Conditions under which Integrals Approximate Partition Functions](#)
- [4.3: Probability Density Functions from the Energies of Classical-mechanical Models](#)
- [4.4: Partition Functions and Average Energies at High Temperatures](#)
- [4.5: Energy Levels for a Three-dimensional Harmonic Oscillator](#)
- [4.6: Energy and Heat Capacity of the "Einstein Crystal"](#)
- [4.7: Applications of Other Entropy Relationships](#)
- [4.8: Problems](#)

This page titled [4: Some Basic Applications of Statistical Thermodynamics](#) is shared under a [CC BY-SA 4.0](#) license and was authored, remixed, and/or curated by [Paul Ellgen](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.