

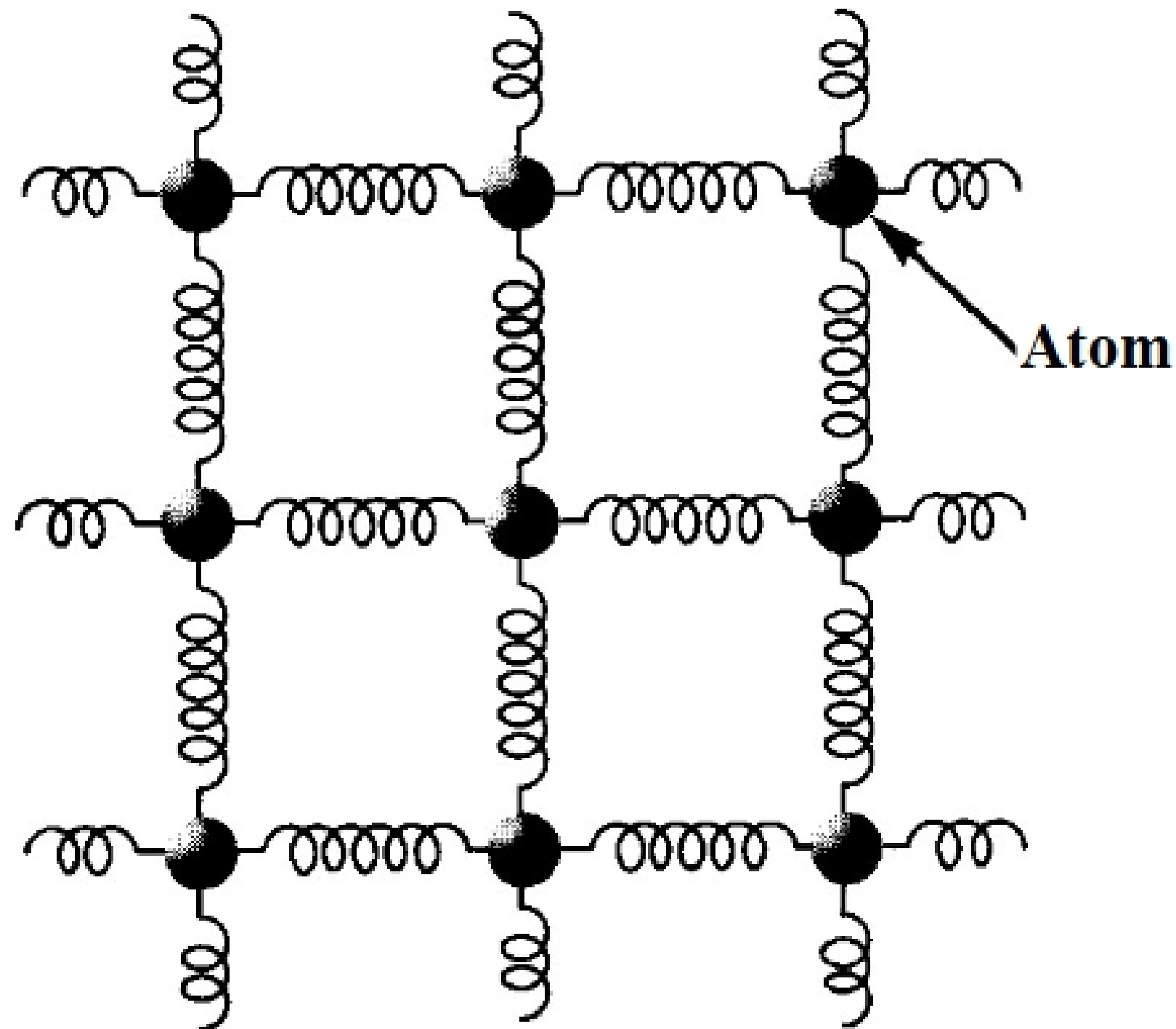
Lecture 30 — The Planck Distribution

Chapter 8, Friday March 28th

- The Free energy of a photon gas
- Radiation pressure
- Quiz
- Einstein and Debye models of vibrations in solids

Reading: All of chapter 8 (pages 160 - 185)
Homework 8 due Mon. Mar. 31st
Assigned problems, Ch. 8: 2, 6, 8, 10, 12

Einstein and Debye models of vibrations in solids



$3N$ modes of vibration; N = number of atoms

Einstein model of vibrations in solids

- Assumes $3N$ independent modes of vibration
- All modes have same frequency, ω_E

