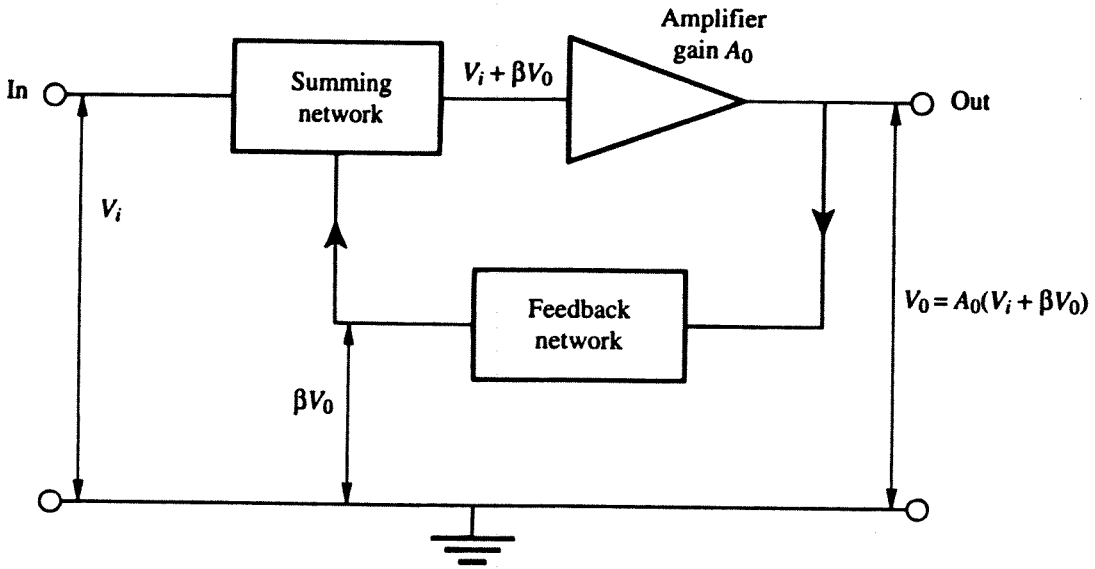

Fig. 1.1. Circuit diagram of a simple amplifier with feedback.

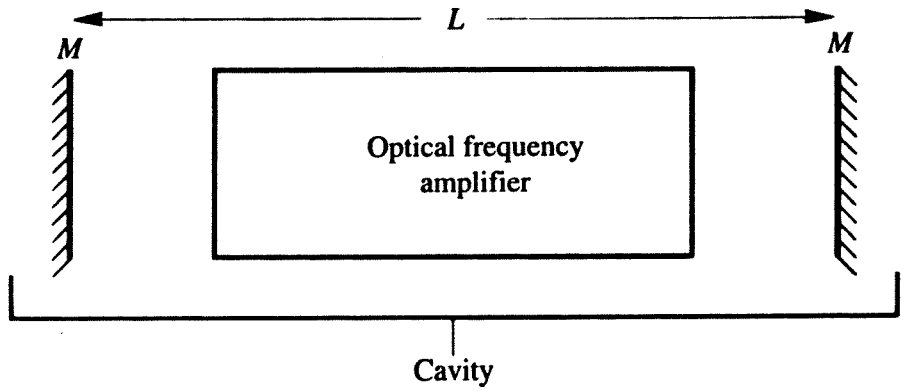

Fig. 1.2. Schematic diagram of a basic laser structure incorporating an amplifying medium and two feedback mirrors, *M*.

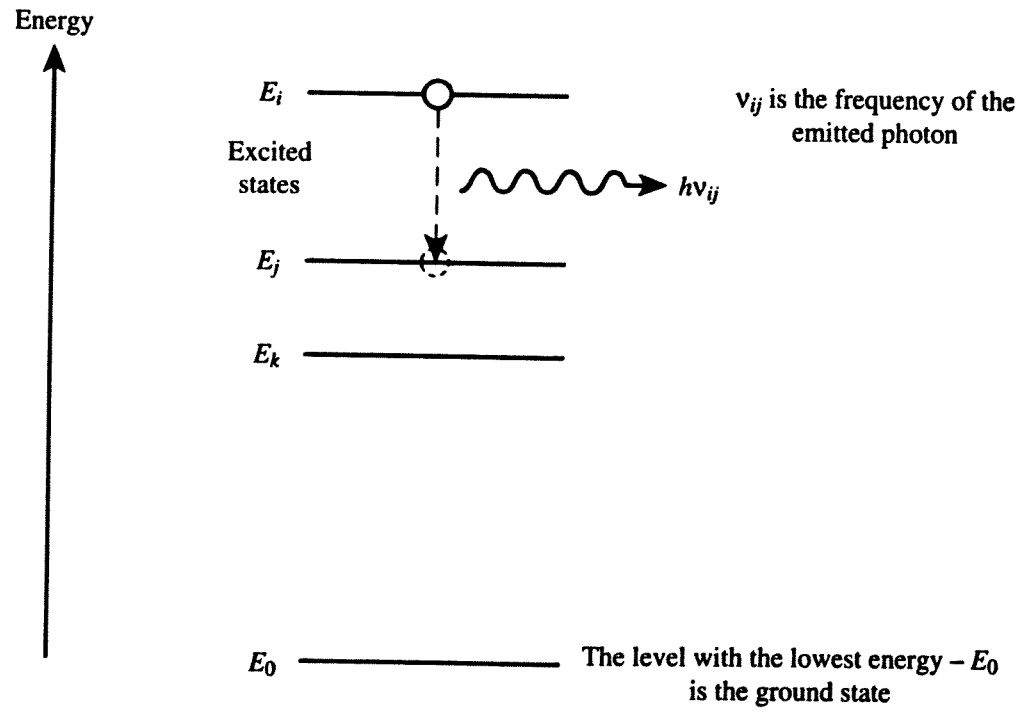

Fig. 1.3. Simple schematic energy level diagram for a particle.

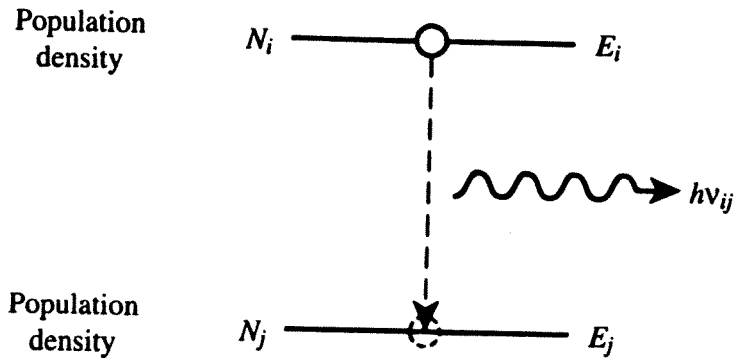

Fig. 1.4. Schematic representation of spontaneous emission between two levels of energy E_i and E_j.

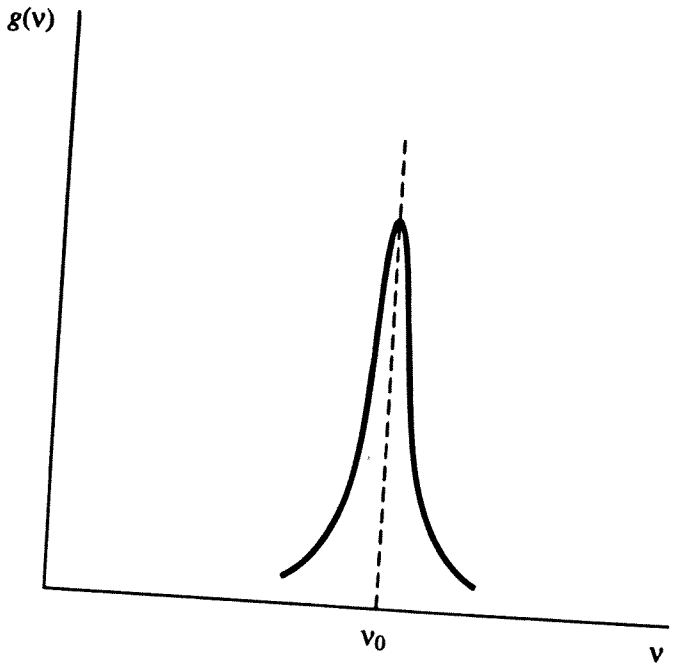

Fig. 1.5. A lineshape function $g(\nu_0, \nu)$.

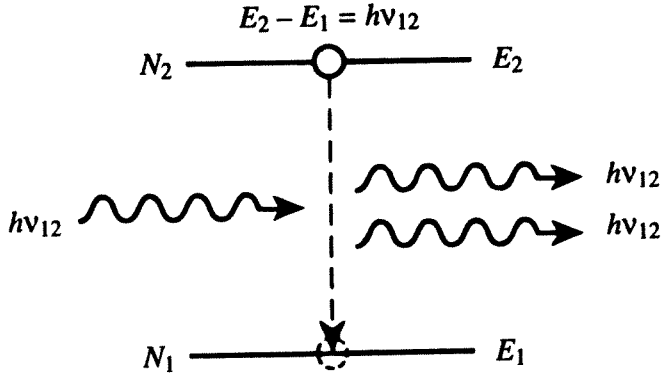

Fig. 1.6. Schematic representation of stimulated emission between two levels of energy E_2 and E_1.

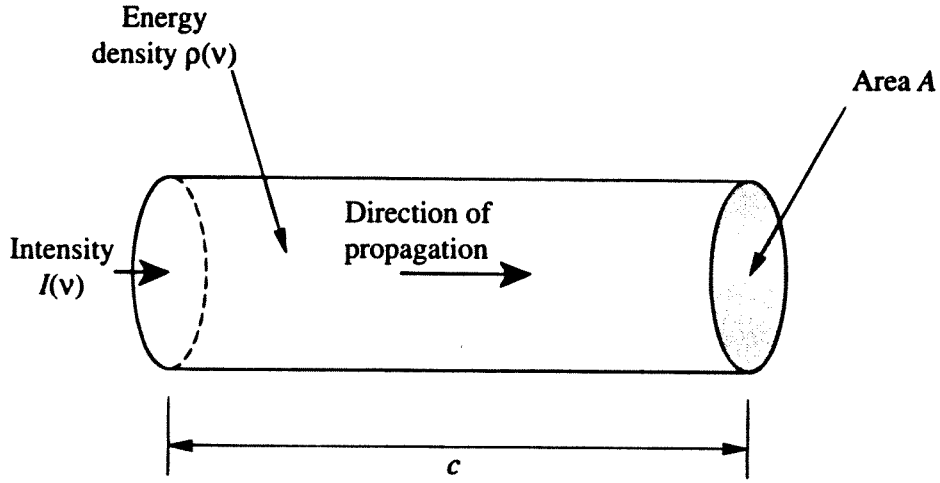

Fig. 1.7. A volume of space swept through per second by part of a plane wave.

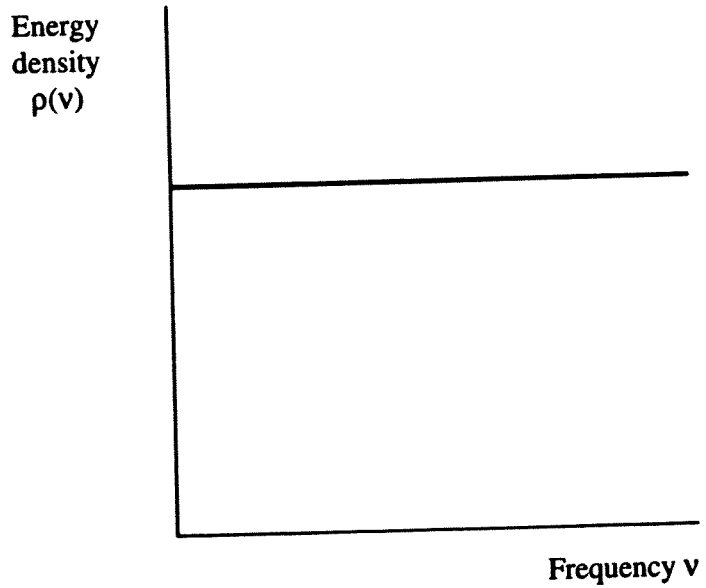

Fig. 1.8. A 'white' energy density spectrum.

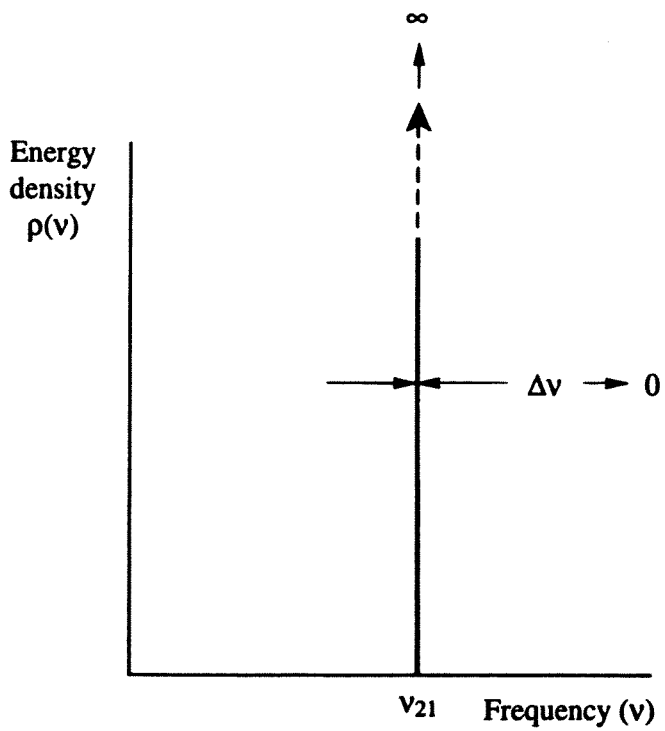

Fig. 1.9. A monochromatic energy density spectrum.

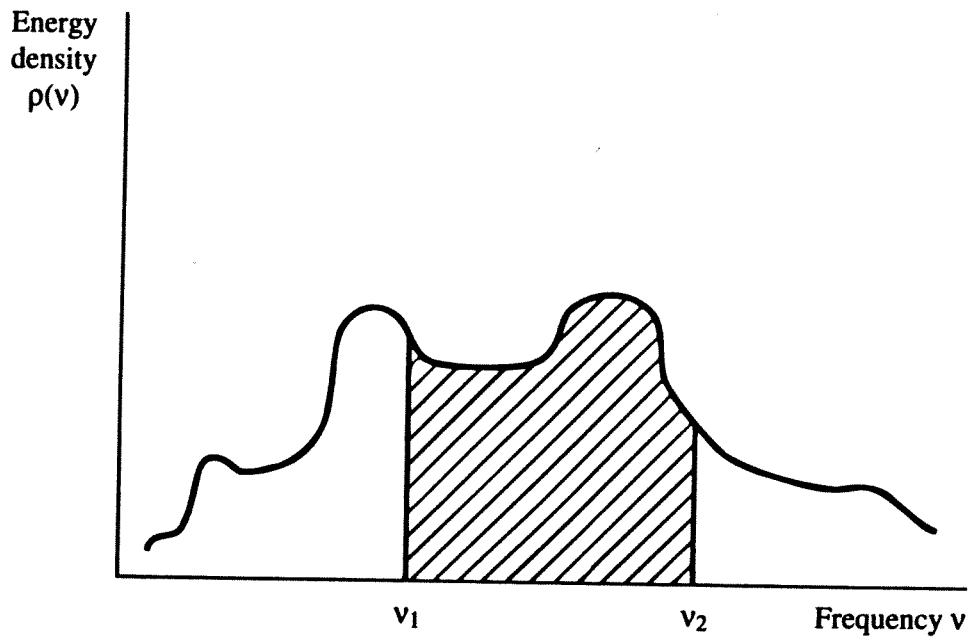

Fig. 1.10. A generalized energy density spectrum.

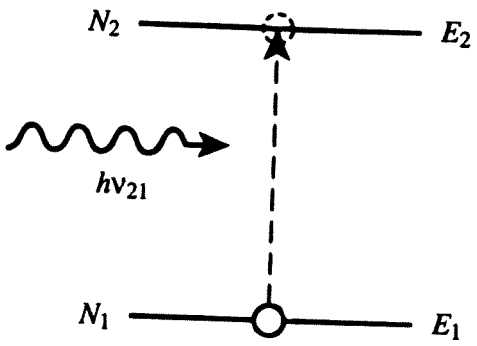

Fig. 1.11. Schematic representation of stimulated absorption between two levels of energy E_1 and E_2.

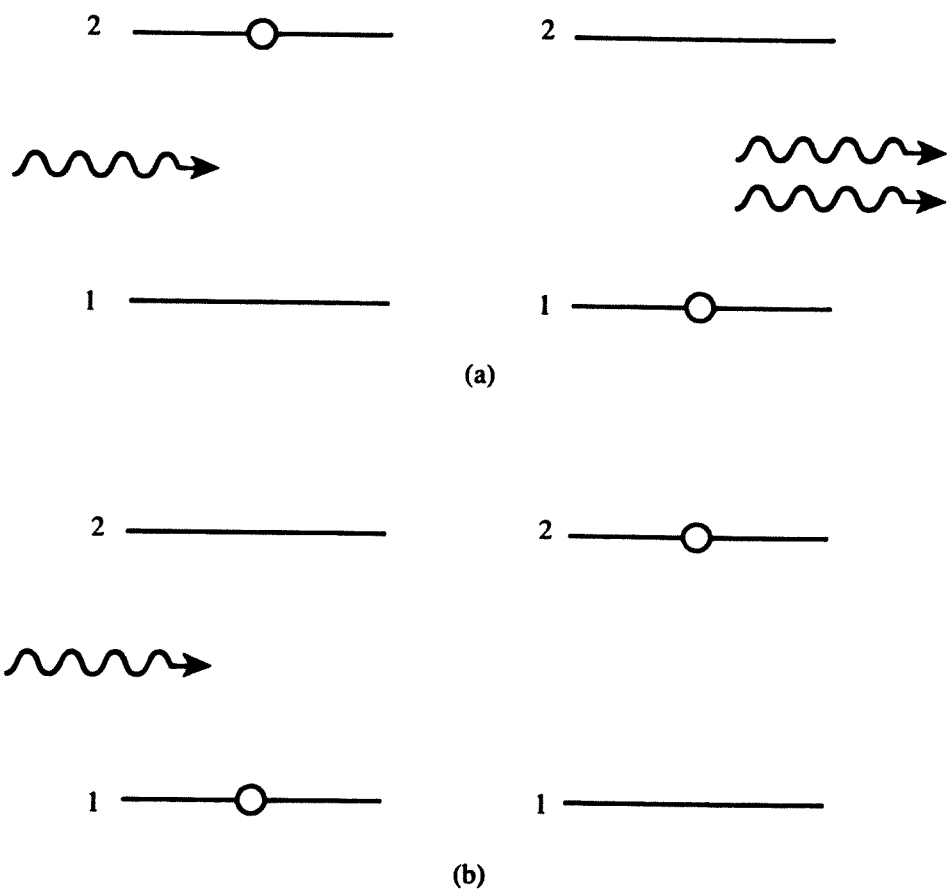

Fig. 1.12.
A photon–particle 'collision' picture of the stimulated emission and absorption processes: (a) stimulated emission, (b) absorption.

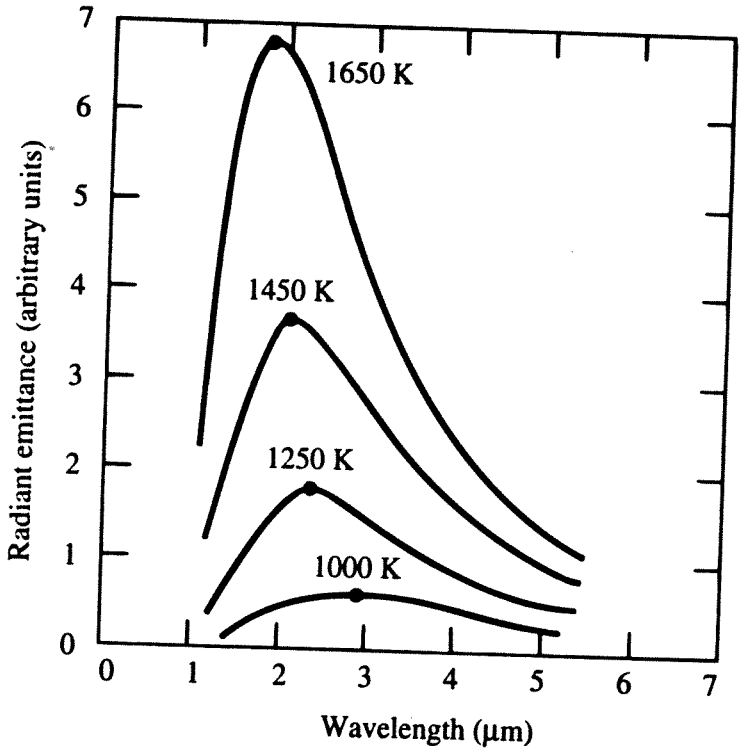

Fig. 1.13. Spectral distribution of black-body radiation at different temperatures.

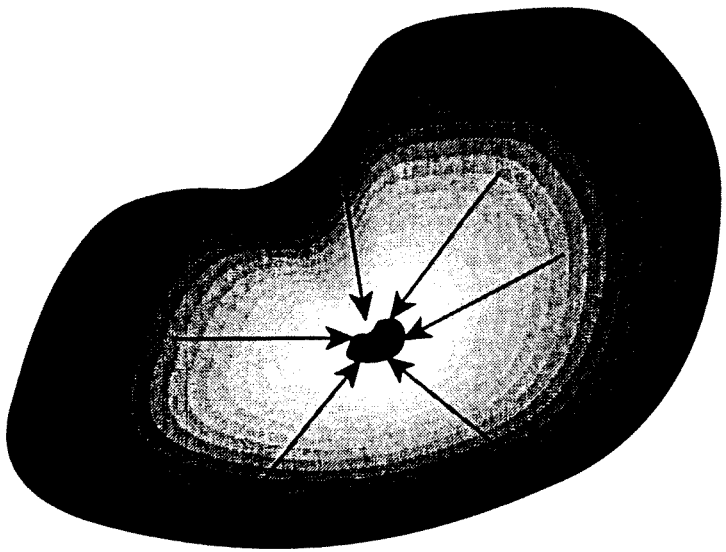

Fig. 1.14. Simple model of a black-body absorber/emitter – an enclosed cavity containing a small hole.

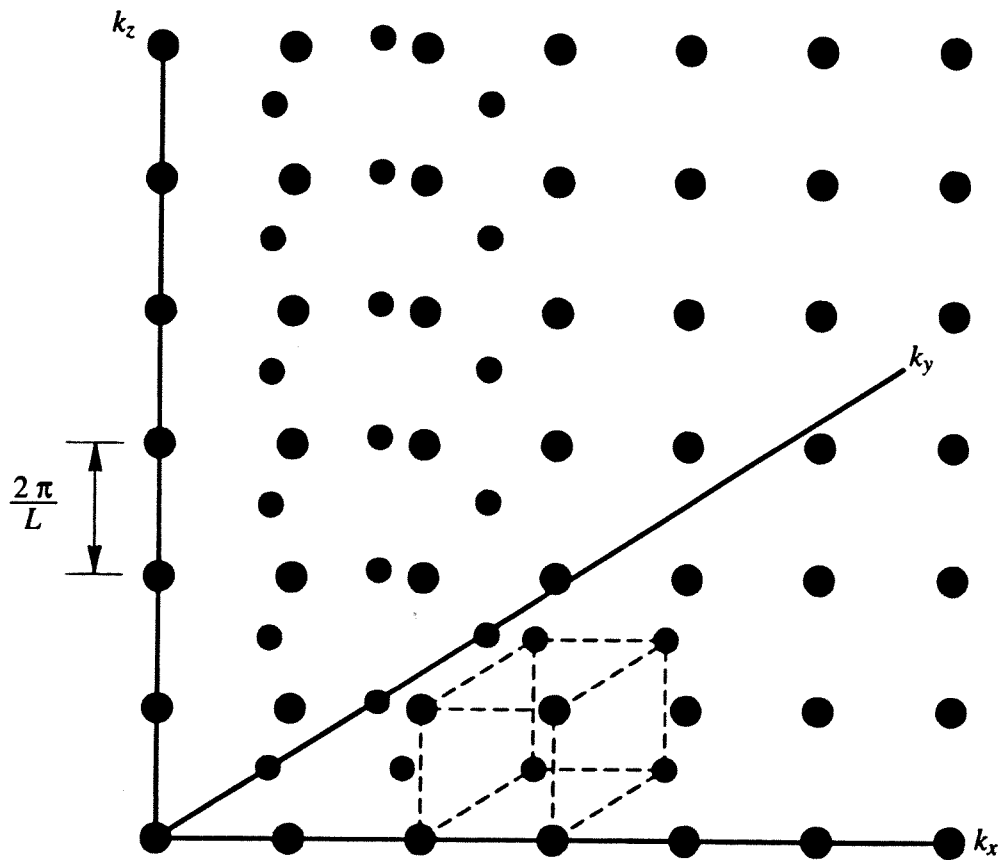

Fig. 1.15. Allowed values of k_x, k_y, k_z in k-space for a cubical cavity of side L.

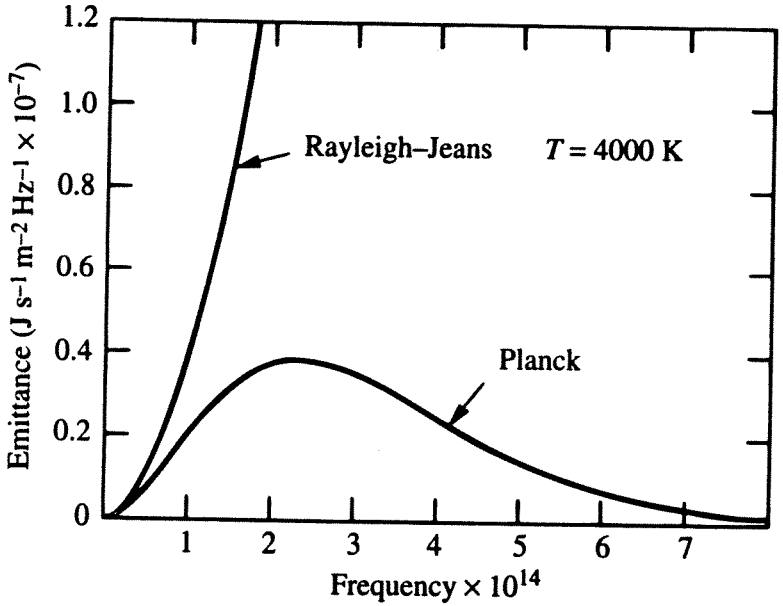

Fig. 1.16. The Rayleigh–Jeans prediction of the spectral intensity of a black body compared to the Planck formula.

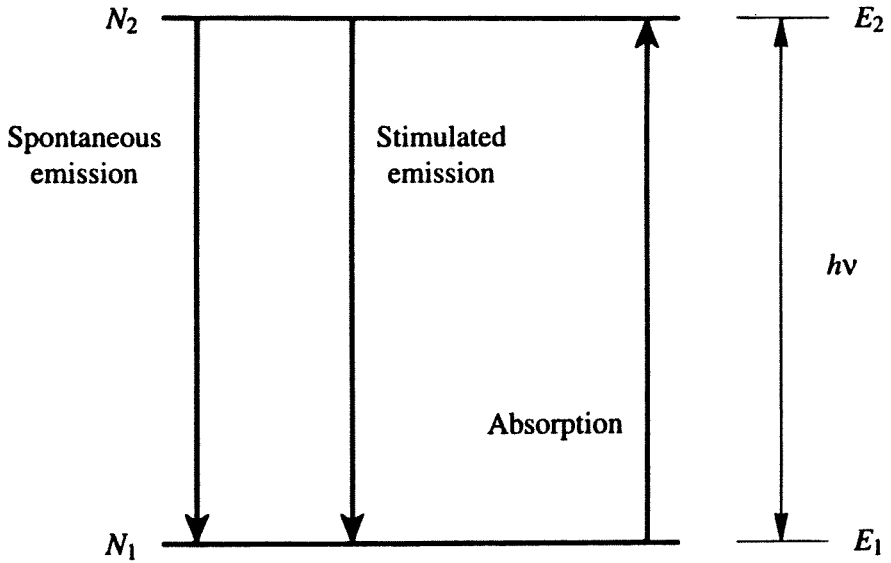

Fig. 1.17. Radiative processes connecting two energy levels in thermal equilibrium at temperature T.

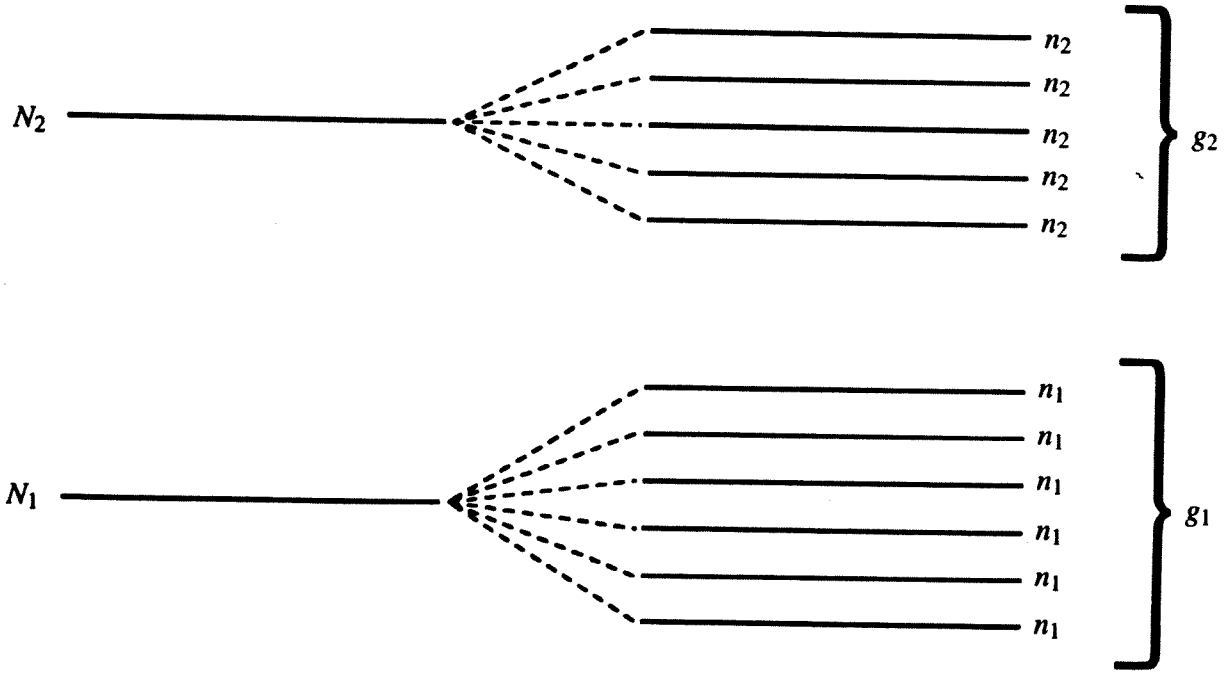

Fig. 1.18. Two energy levels, each of which has a number of sub-levels of the same energy.