$$N_4$$
  $E_4 = 4\hbar\omega$   $P_4 = A\exp(-4\hbar\omega/kt)$   $N_3$   $E_3 = 3\hbar\omega$   $P_3 = A\exp(-3\hbar\omega/kt)$   $N_2$   $E_2 = 2\hbar\omega$   $P_2 = A\exp(-2\hbar\omega/kt)$   $N_1$   $E_1 = \hbar\omega$   $P_1 = A\exp(-\hbar\omega/kt)$   $N_0$   $E_0 = 0$   $P_0 = A$