Physics 410 - 2004
Thermal Physics

Problem Set 8

1. Wien's displacement law: find the position of the maximum ω_m of the spectral density of radiation u_ω. Analyze its temperature dependence. Use the values of the Planck constant and Boltzmann constant to find ω_m and the corresponding wavelength of light for $T = 6000$ K and for $T = 2000$ K. (5 pt)

2. Chapter 4, p. 112, problem 9 (5 pt)

3. Chapter 5, p. 146, problem 6 (5 pt)

4. Chapter 5, p. 147, problem 10 (7 pt)

You need to have 20 points (2 extra credit points)

The problems are from Kittel & Kroemer, *Thermal Physics*, 2nd edition, (Freeman, NY 1980).