THE SUN: A TYPICAL STAR

GOALS:
To gain an introduction to radiation transfer theory: cross section (σ), optical depth (τ), absorption coefficient (κ)
To learn about the Sun’s photosphere: granulation, limb darkening
To gain a brief overview of the other two layers of the solar atmosphere: the chromosphere and the corona.
To gain a brief overview of solar activity, especially sun spots.

DUE: Wednesday, Feb 24, 2010 (noon)

READ: Chapters 6:1-3 (read 6:4-6 for general familiarity with content but not mastery)

HOMEWORK: (Sign the honor code at the end)

1. Q6.1 (6 pts) [Radiation transfer]
2. 6.3 (10) [Radiation transfer]
3. Q6.4 (4) [Optically thin]
4. 6.5 (5) [optical depth]
5. Q6.9 (6) [H– ion]
6. 6.11 (5) [Thermal broadening]

Review session: 4:30-5:30 pm Tuesday Feb 23, in NSC 119.

Office hours: 1:00-2:00 pm Monday Feb 22 and I will be available Wednesday Feb 24 11:00-11:40 in my office.

Required talk: Friday, Feb19, 7:30-8:30 pm in NSC 224 – “Red Giants to White Dwarfs: Studying the Death of Stars Like the Sun” by Prof. Bruce Hrivnak