

Astronomy 201a: STELLAR & PLANETARY ASTROPHYSICS

Instructor:

Dimitar D. Sasselov (room: P-336, phone 495-7451)

Time: Mon, Wed 11:15- 12:40

Web-page: <http://cfa-www.harvard.edu/~sasselov/astro201a/>

Introduction Sept. 15

An Overview of Stellar Evolution (HKT 2) Sept. 17... (4 lectures)

Thermodynamic Properties of the Stellar & Planetary Interior (HKT 3) Oct. 1 (2 lectures)

Radiative Heat Transfer (HKT 4) Oct. 6... (2 lectures)

Convective Heat Transfer (HKT 5) Oct. 15... (3 lectures)

Stellar Energy Sources (HKT 6) Oct. 27 (1 lecture)

Stellar Models (HKT 7,9) Oct. 29 (1 lecture)

Overview of Planetary Astrophysics Nov. 3 (1 lecture)

Planetary Models: Gas Giant Planets Nov. 5... (2 lectures)

Planetary Models: Terrestrial Planets Nov. 12... (3 lectures)

Extra-Solar Planets Nov. 24... (3 lectures)

Recent Developments in Extra-Solar Planets Research Dec. 3 (3 lectures)

 Characterization of Hot Jupiters

 Super-Earths, Ocean Planets

Reading Material :

C.J. Hansen, S.D. Kawaler & V. Trimble, *Stellar Interiors, 2nd Ed.*, Springer-V., 2004.

I. de Pater & J. Lissauer, *Planetary Sciences*, Cambridge UP, 2001.

G. Davies, *Dynamic Earth*, Cambridge UP, 1999.

Grading :

40% final exam, 60% problem sets.