## INTRODUCTION TO ASTROPHYSICS

- Digression: how to study for the theoretical astrophysics test? (and why the heck did you not tell us this before?!?)
- New chapter: thermonuclear processes in stellar cores!
- Basic terminology
  - a prototype nuclear reaction
  - atomic (mass) number, charge number, and their conservation
  - $\circ$  key concept for energy production
  - mass defect
- Nuclear binding energies (look at the back of the page!)
  - $^{\circ}$  inversion at iron
  - alternating structure at low atomic numbers
- Nuclear cross-sections
  - $^{\circ}$  classical cross-section
  - quantum (de Broglie) cross-section

