

August 31, 2007

Book -1 copy on 2 hour reserve in
Physics/Math/Astronomy Library RLM.

Handouts from first class

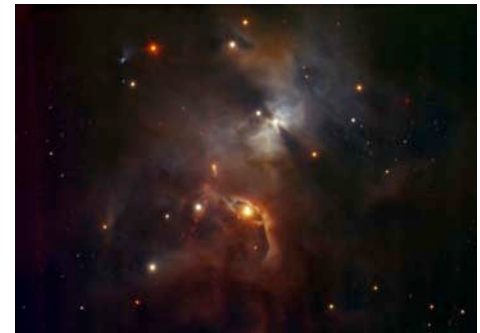
Star Parties - can be useful for extra credit

Astronomy in the News?

Astronauts do not have a drinking problem

Pic of the Day - Star Formation Region

In Constellation Serpens



Experiment for One Minutes Exams:

Please download the ABCD color template from the class web site, in the “announcements” box and bring it to class next week.

Background Check

What is a main sequence star?

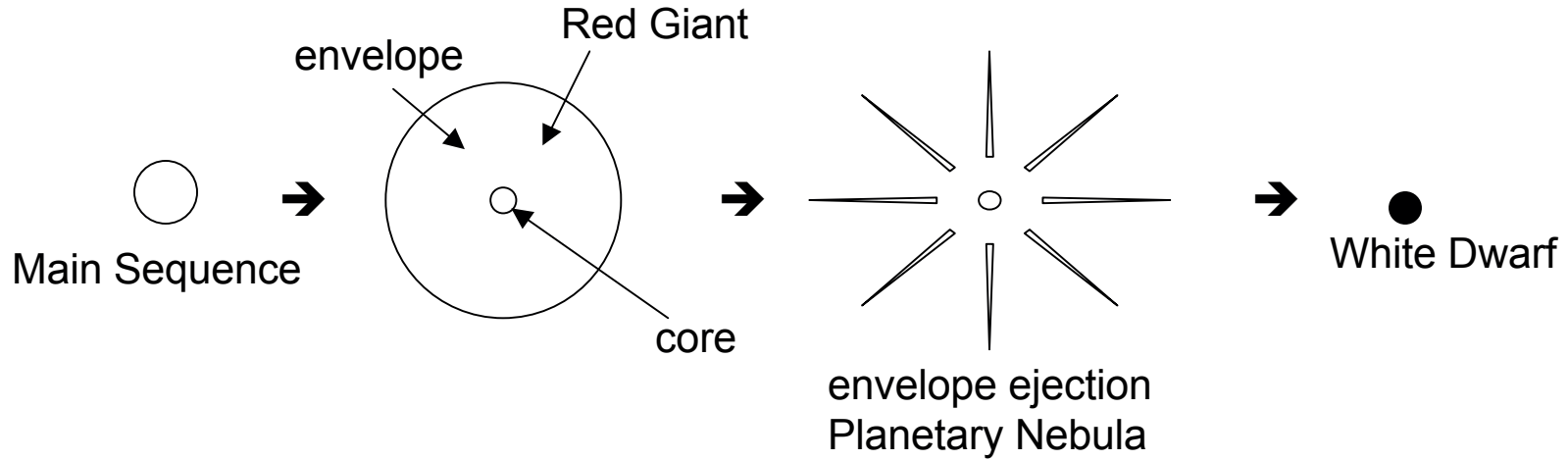
What is a red giant star?

Write a few sentences, talk with your neighbors.

Concept Check

What's on the cover of the book?

White Dwarfs (Chapter 5)

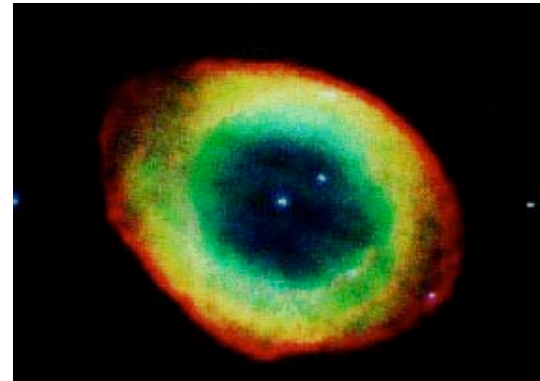


Most common stellar “corpse.” Come from low mass stars
→ plentiful.



Sky Watch Extra Credit:

Try to find the constellation Lyra, location of the Ring Nebula, Messier 57.



Other planetary nebulae.

Also Moon, Jupiter, Big Dipper for orientation, NSEW, learning to use a star chart,

White Dwarfs

Essentially every white dwarf formed since beginning of Galaxy is still here 10-100 billion of them (~ 100 billion stars total)

Most are dim, undiscovered, see only those nearby, none naked eye

Sirius, brightest star in the sky, has a white dwarf companion. Can't see the companion with the naked eye, too small, dim, but Sirius is easy if you look for it at the right time.

Find Sirius for the extra credit project.

What do we know about white dwarfs?

Mass ~ Sun

Most are single, $0.6 M_{\odot}$ (solar masses)

Some in binary systems, higher mass

Size ~ Earth

~1% radius of Sun

$$\text{Density} = \frac{\text{mass}}{\text{volume}} \rightarrow \frac{10^6 \text{ grams}}{\text{c. c.}} \sim \frac{\text{tons}}{\text{cubic centimeter}}$$

OR MORE!

HUGE GRAVITY!