January 16, 2008

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

Handouts from first class

ABCD answer sheets for One Minute Exams

Star Parties - can be useful for extra credit

Moon?

Astronomy in the News?

History Channel Dark Energy/Matter

Pic of the Day -



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 (Chapter5)

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









Sky Watch Extra Credit:.

Constellation Draco site of the Cat's Eye Nebula Can't see with naked eye, but can find Draco Other planetary nebulae.

Also Moon, Mars, 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



HUGE GRAVITY!



Same mass, smaller size, gravity on *surface* is larger because you are closer to the *center*.

Gravity on surface acts *as if* all mass beneath were concentrated at a point in the center -- Newton/Calculus