• Final exam next week. As stated in the course syllabus (p. 5 in your Reader), the final examination in this course will take place at the following times and locations:

Section 4 (9:30 AM class): Tuesday, May 13, 10:30 AM → 12:30 PM
Room SH-247 (normal lecture room).

Section 7 (2 PM class): Thursday, May 15, 1:00 PM → 3:00 PM,
Room NE-060 (normal lecture room).

Details about the nature of the final exam are contained in the handout, “Final Exam Guide”. Two points worth emphasizing:

1. The final exam must be taken at the scheduled time, and no makeup (or early) exams will be given.
2. The final exam will consist of:
   • 75 multiple choice questions (worth 75% of the exam grade).
   • 1 essay question (worth 25% of the exam grade).

On page 6 of the Final Exam Guide handout you will find four potential final exam essay questions. One of the four questions will appear, in the exact form that it is written in the handout, on your final exam.

• Reading Quiz due tonight! The Reading Quiz for Week 15 (“Week15_quiz”) is due tonight, Tuesday, May 6, by 11:55 PM. It is a philosophical essay question, and you are guaranteed to get a 100% on it so long as you write something! (By the way, I am enjoying reading all of your responses to this question, and in some cases will respond to you directly via email on what you’ve written.)

• No new reading assignment for this week. Your final reading assignment was included in last week’s Weekly Handout; there is no additional reading assignment for this week.


• Reminder: Extra question & answer session next Monday evening. On Monday, May 12, an extra help session will be held in Rm. 216 of the physics-astronomy building from 7:00 – 8:30 PM. Come armed with all questions that have cropped up during your studying!

• Final Grades. Final grades will be posted to the SDSU Web Portal immediately after they are calculated; this will most likely occur on or about Wednesday, May 21 (but definitely by 11 PM, May 23). If you would like more details about your grade, simply send me an email and I will send you a list of all of your grades for the semester (including the final exam) once final grades have been calculated. You may also stop by my office during office hours next semester if you’d like to pick up your exam “packet” (i.e., similar to the packets created throughout the semester after each exam).

(At least we now know what we don’t know, right?)
Two (Optional) Public Talks this Week

**Talk 1**

Who: Prof. George Fuller (UCSD)
What: “Neutrinos: Stealthy Agents of Destruction and Creation in the Cosmos”
When: Thursday, May 8, 7 PM
Where: Geology, Mathematics and Computer Science Building (GMCS), Rm. 333
Presented by: SDSU Dept of Physics

**Talk 2**

Who: Dr. Mark Phillips (Las Campanas Observatory)
What: “Exploding Stars and the Fate of the Universe”
When: Friday, May 9, 7:30 PM
Where: Geology, Mathematics and Computer Science Building (GMCS), Rm. 333
Presented by: SDSU Dept of Astronomy

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**Hubble’s Discovery**

**Hubble’s Law:** The linear relation between the apparent speed of recession (as revealed by the Doppler shifting of spectral lines) and its current distance from us:

\[ v = H_0 d \]

- \( v \) = velocity in km/s
- \( d \) = distance in Mpc
- \( H_0 \) = Hubble’s Constant, in km/s/Mpc

**Hubble’s Constant:** Constant of proportionality between the velocities of remote galaxies and their distances. Units: \( \frac{\text{km}}{\text{s Mpc}} \)

**Example:** The Sombrero galaxy is found to be receding from us at nearly 1,000 km/s. If \( H_0 = 100 \text{ km/s/Mpc} \), approximately how far away is it from us?