Astronomy Mini-Conference Logistics

- Who: Y'all
  - Also sponsored by the Wyoming NASA Space Grant Consortium (they're providing some funds for food-like items)
- What: Presentation of Posters
  - You will have some table space. If you can, try to prepare the posters in a way that they stand up without external assistance.
- When: December 3
- Where: Physical Sciences building, Rooms 132, 133, 135, and 137
- Why: Experience what it is like to attend a real science conference! Present scientific results and discuss them with your peers!

Astronomy Mini-Conference Logistics

- How
  - Eight lab sections/four rooms = two sections per room… most likely configuration:
    - PS 132: Monday and Thursday morning sections
    - PS 133: Tuesday sections (both)
    - PS 135: Wednesday and Thursday evening sections
    - PS 137: Thursday afternoon sections

Astronomy Mini-Conference Logistics

- How
  - Agenda:
    - Have your poster set up by 12:05PM.
    - One person from your group will stand by the poster and do a presentation for half the time, and then switch with another person in the group.
    - Other members of the group will attend sessions in other rooms and evaluate two posters using the evaluation form.
    - If there is a third person in the group, that person will evaluate an additional two posters (in lieu of presenting your group's poster).
    - At any given time, there will be no more than 2 people evaluating a given poster.
    - Presentations and evaluations should take no longer than 10 minutes.
      - i.e., 12:05-12:15PM, 12:16-12:26PM, switch presenter, 12:27-12:37PM, 12:38-12:48PM.

Astronomy Mini-Conference Logistics

- Notes:
  - Be VERY respectful of the equipment in the rooms. There are ongoing Physics labs in all but the Astronomy Lab room.
  - The conference will end promptly at 12:50PM to allow time for experiments for the physics labs to be set up again.
  - This is the first time this has been tried with an introductory course. We will likely advertise this event university-wide. So expect visitors from outside the class.

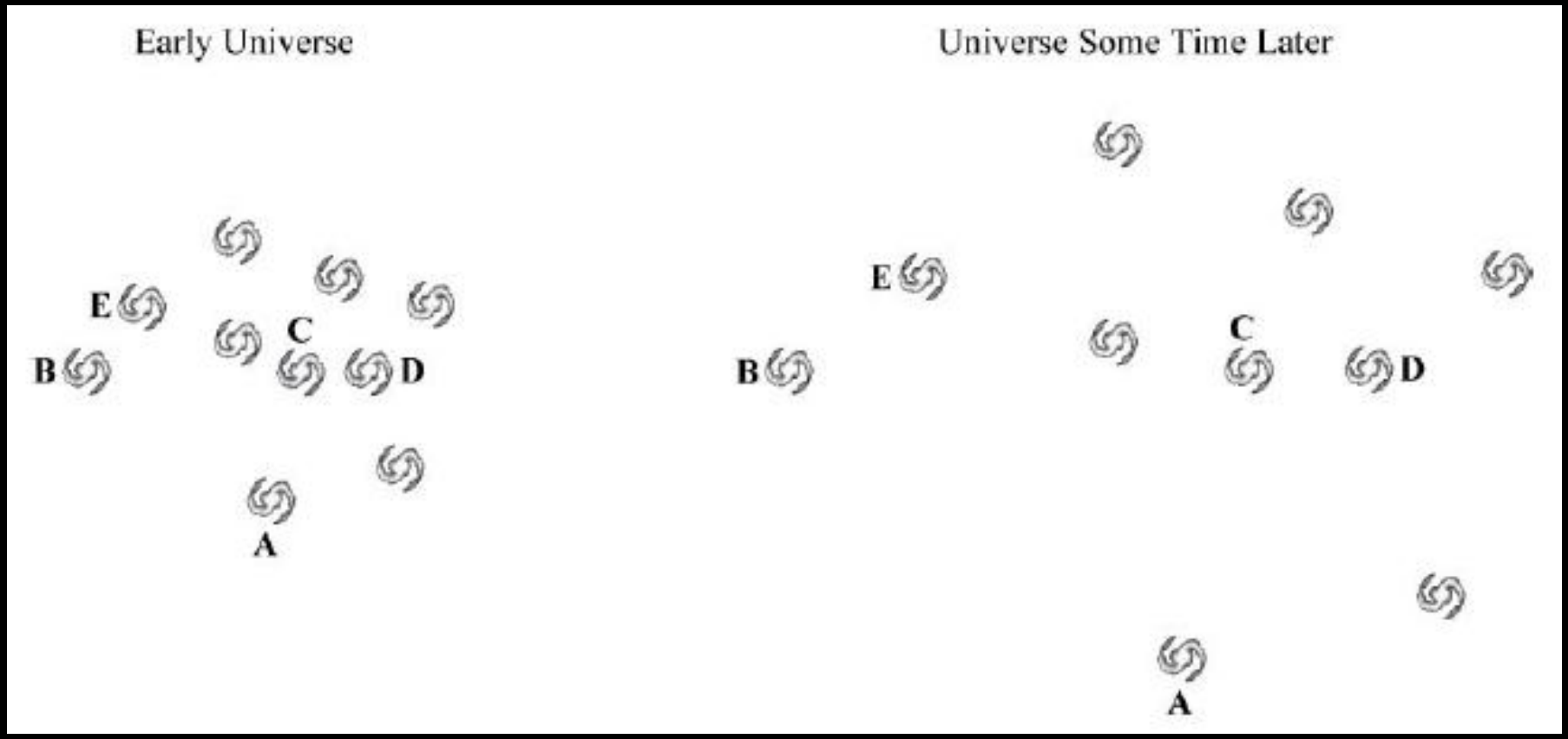
Other announcements

- Observing session on Monday night for those that didn't come before…
  - Everyone is welcome though… (no extra credit)
- Semester Observing Projects are due NO LATER THAN December 1 at the beginning of class.
  - If you have them done, turn them in now and get it out of your hair.
- Practice quiz is posted.

Think

Pair

Share!



Which of the following conclusions can you draw about the expansion of the universe from the drawing shown?

A. Galaxy C is the center of the Universe
B. All galaxies move the same amount during the expansion of the universe.
C. Nearby galaxies move more during the expansion of the Universe.
D. All galaxies appear to move away from each other during the expansion of the Universe. ← CORRECT

Fifteen years ago, a quasar was observed that was found to be located 8 billion light years away. If our universe is approximately 15 billion years old, when did the quasar emit the light that we observe?

A. 15 years ago

B. 7 billion years ago

C. 8 billion years ago ← CORRECT

D. 15 billion years ago

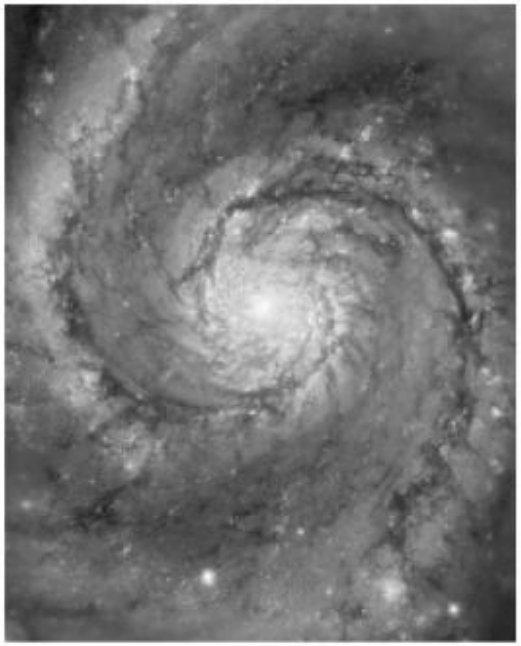
The SOHO satellite orbits close to the Sun and detects a solar flare erupting at 10:00 AM, as measured by the satellite's clock. Your clock is exactly synchronized with the satellite clock. The Sun is located 8 light minutes away from Earth. If you were to observe this flare from your backyard, you would need to observe it at:

A. 9:52 AM.
B. 10:00 AM.
C. 10:08 AM. ← CORRECT
D. None of the above are correct, since this flare has already occurred.

Edna lives on the planet Fearsome which is 20 light years away from Earth. George lives on the planet Grumble which is 40 light years away from you. On December 1, 2008 you receive images of both Edna and George on their 35th birthdays. What can you say about their actual ages on December 1, 2008?

A. Both people are the same age.
B. Edna is older than George.
C. George is older than Edna. ← CORRECT
D. Their relative ages cannot be determined.

In which of these galaxies would you expect to see bright blue stars?



Galaxy A

Galaxy B

A. Only galaxy A ← CORRECT
B. Only galaxy B
C. Both galaxies A and B
D. Neither galaxy A or B

Using spectroscopic parallax, you find a star's distance to be 76 parsecs. You now find out that the star isn't a main sequence star—it's actually a red giant. This means that the star is located

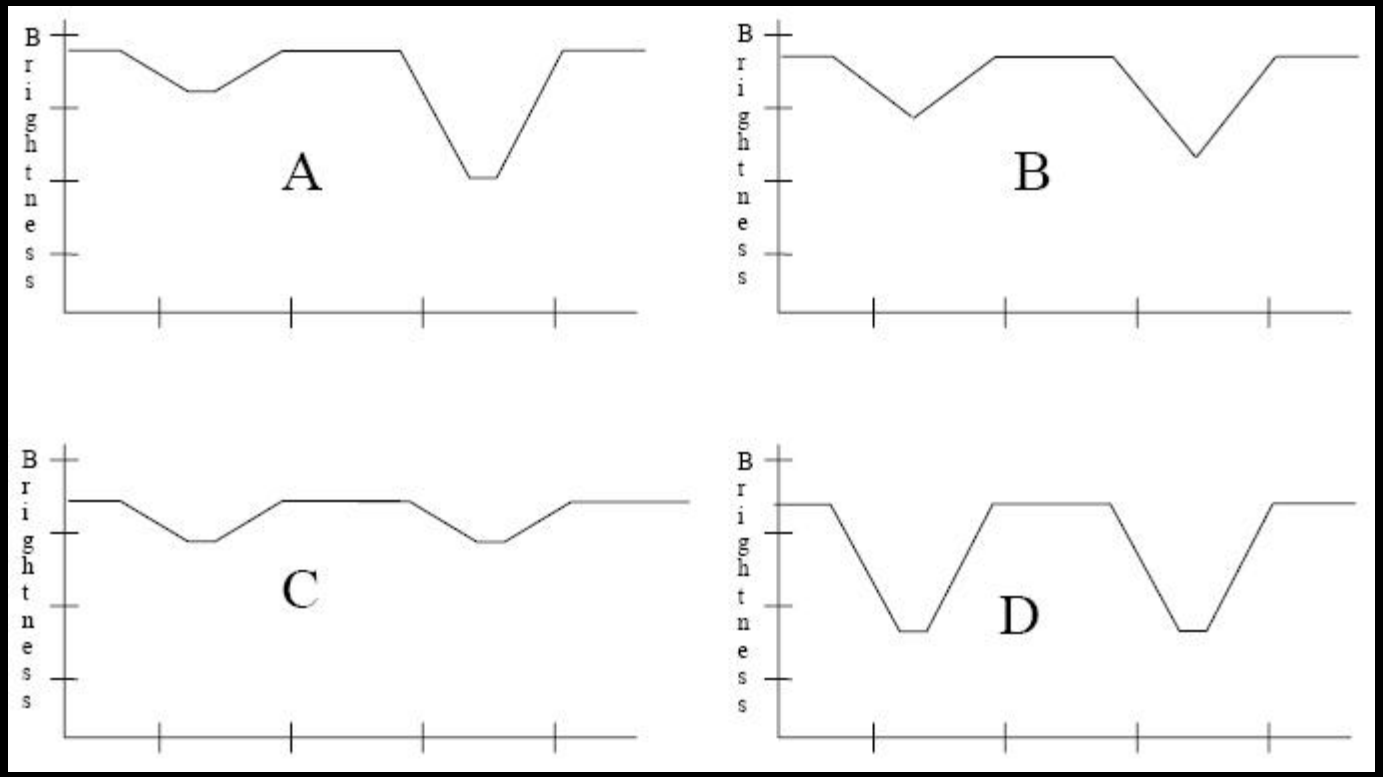
A. farther than you originally thought. ← CORRECT
B. closer than you originally thought.
C. at the same distance as originally thought.

In which of the following situations would you receive a greater amount of light from a binary star system consisting of an M5 Red Giant and an M5 main sequence star?

A. When the Red Giant is in front of the main sequence star.
B. When the main sequence star is in front of the Red Giant.
C. You would receive the same amount of light for both situations described in choices A and B. ← CORRECT
D. None of the above. ← also techincally correct, but not the best answer

Which of the graphs (A-D) would correspond with an A spectral type main sequence star orbiting a Red Giant star in an eclipsing binary star system? If none of the graphs seems to be possible, answer with an “E”.

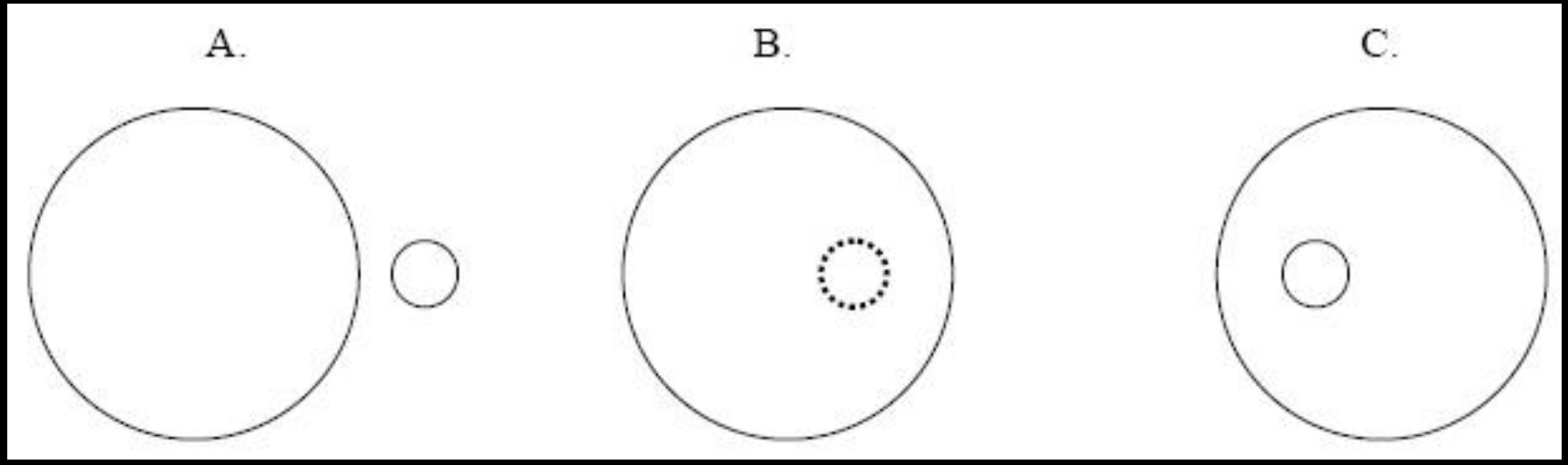
CORRECT



Which of the following is true of a binary star system consisting of a Red Giant and a White Dwarf?

A. You will receive more light when the dwarf is behind the giant than when the giant is behind the dwarf.
B. The time it takes for the dwarf to pass behind the giant is shorter than the time for the giant to pass behind the dwarf.
C. The force of gravity exerted on the dwarf by giant is stronger than the force of gravity exerted of the giant on the dwarf.
D. The orbital period of the dwarf is shorter than the orbital period of the giant.
E. None of the above. ← CORRECT

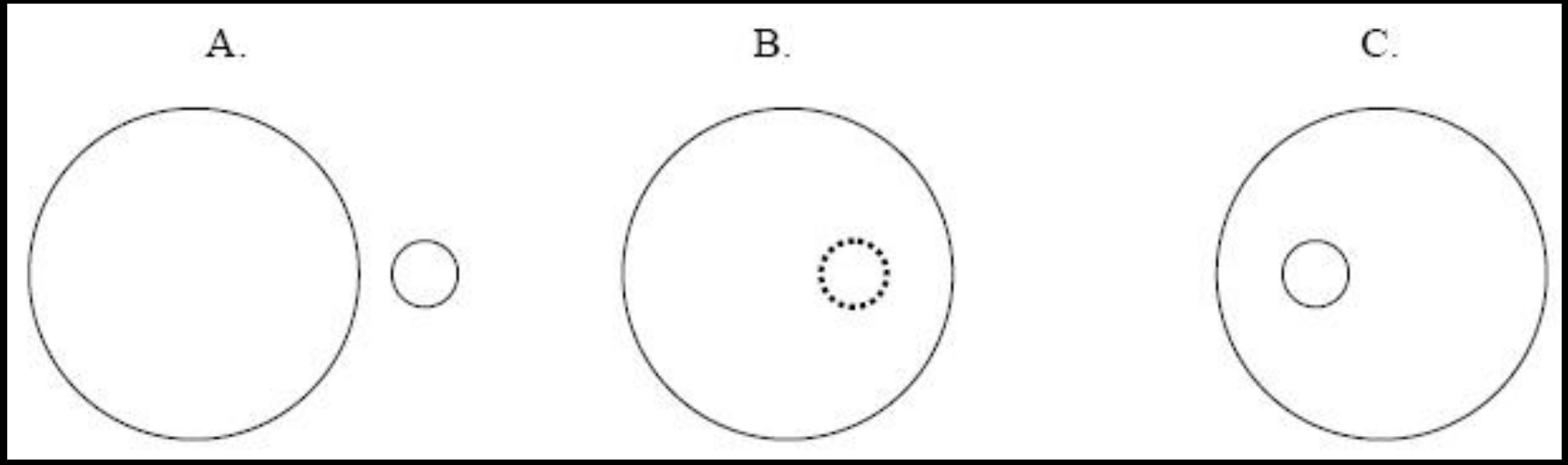
The sketches below illustrates how two main sequence stars might look at three different times. *Note: The sketch with the small circle shown with dashed lines illustrates the time when the smaller star was located behind the larger star.*



In which case shown would the amount of light we would observe from Earth be the least?

A. at time A
B. at time B
C. at time C ← CORRECT
D. At more than one of the times.
E. There is not enough information to determine this.

The sketches below illustrates how two main sequence stars might look at three different times. *Note: The sketch with the small circle shown with dashed lines illustrates the time when the smaller star was located behind the larger star.*



In which case shown would the amount of light we would observe from Earth be the greatest?

A. at time A ← CORRECT
B. at time B
C. at time C
D. At more than one of the times.
E. There is not enough information to determine this.

Black holes are formed by

A. a lack of any light in a region of space.
B. supernovae from the most massive stars. ← CORRECT
C. supernovae from binary stars.
D. collapsed dark nebulae.

How does the Sun produce the energy that heats our planet?

A. The gases inside the Sun are on fire; they are burning like a giant bonfire.
B. Hydrogen atoms are combined into helium atoms inside the Sun's core. Small amounts of mass are converted into huge amounts of energy in this process. ← CORRECT
C. When you compress the gas in the Sun, it heats up. This heat radiates outward through the star.
D. Magnetic energy gets trapped in sunspots and active regions. When this energy is released, it explodes off the Sun as flares that give off tremendous amounts of energy.
E. The core of the Sun has radioactive materials that give off energy as they decay into other elements.

Main sequence stars begin life as

A. a very large planet.
B. a cloud of gas and dust. ← CORRECT
C. a very hot planet.
D. an explosion at the center of a newly forming solar system.