ASTRONOMY EXTRA CREDIT

Extra Credit write-ups are due no more than 2 weeks following completion of the extra credit event. Use complete sentences for all answers. Always explain your thinking clearly.

Grading scheme:
- 5 points – complete answers with enough detail so that others could learn astronomy from what you wrote
- 4 points – complete answers with detail such that I can see what you learned about astronomy
- 3 points – most answers are complete; you discussed some astronomy
- 2 points - evidence indicates entire event was attended (for open-ended events, such as ECC telescope viewing, you must provide physical evidence of attendance for at least 45 minutes).
- 0 points - some answers are missing or provide insufficient detail. You did not demonstrate that you paid attention or learned much about astronomy.

Sky (naked eye/telescope) viewing OR visiting an astronomical establishment

Examples include:
- **Griffith Observatory** (eligible for up to double credit if you give detailed responses and explanations because there are so many exhibits). This is one of the best public astronomy facilities in the world. Many of the topics we discuss in this class have corresponding exhibits at Griffith. The more you explain about those exhibits, the more credit you will receive. Entrance to the observatory is free, but planetarium show tickets are not. For reservations and for more information, check out http://www.griffithobs.org
- **Jet Propulsion Laboratory Open House** (only occurs during Spring semester; eligible for up to triple credit if you give detailed responses and explanations because there are so many exhibits). This is where the work behind many of the discoveries about the planets were done. Most of the planet pictures I show during class were taken by spacecraft built by JPL. The more you explain about those exhibits, the more credit you will receive. Entrance to the open house is free. For more information, check out http://www.jpl.nasa.gov/pso/oh.cfm
- **ECC telescope viewing sessions**: look around the planetarium for upcoming dates.
- **Mt. Wilson Observatory**: north of Pasadena, may be open to visitors on weekends. Their 100-inch reflector was the world's largest during the first half of this century. Call (626) 793-3100 for hours.
- **Palomar Mountain Observatory**: about 100 miles south of here, has a small astronomical museum and a gallery for viewing of (not through) the 200-inch telescope. Call (626) 395-4033 or http://www.astro.caltech.edu/palomarpublic/index.html for info. Feedback about the posters in the gallery is required in your report (since I made some of them.) This is a few hours away and is up a mountain on a curvy road. Allow 3 hours travel, each way. Closer to San Diego than LA.
- **California Science Center** (but they don’t always have astronomy exhibits), is located at 700 State Drive in Exposition Park, Los Angeles. Open from 10am-5pm daily. Admission is free, but parking is $5. See http://www.casciencectr.org or call (323) 724-3623 for more info
- **Local planetarium events** like a public show at ECC, Santa Monica College, Orange Coast College.

You are not allowed to visit the same place twice, except for public viewing (e.g. telescope sessions).

**Questions you must answer for extra credit**
1. **The most important question**: What did you learn about astronomy? What did you see/hear that you already knew from class?
2. Answer the appropriate version of this question.
   - a. **For observatories/museums only**: What exhibits did you see & what did they try to teach?
   - b. **For night sky indoor planetarium shows only**: What did you see that would help you learn things we discussed in class?
3. What were your overall impressions of the visit/event?
4. Was it a good show or program?
5. What was the most interesting aspect, and/or what impressed you most? Why?
6. What was the most confusing part, and/or what impressed you least? Why?
7. Would you recommend it to other astronomy students? Why or why not?
8. According to the scale at the top of this page, how many points do you deserve and how do you meet the criteria listed at the top of the page?

**Movies, books, and television shows.** You may suggest other movies or TV shows not on this list. Movies include: *Apollo 13*, *An Inconvenient Truth*, *Deep Impact*, *Contact*, *Roving Mars*, and *Armageddon*. TV shows include: any episode of *The Universe* (on History Channel), any episode/segment related to astronomy of *NOVA* (on PBS and some are online at [http://www.pbs.org/wgbh/nova/](http://www.pbs.org/wgbh/nova/)). Books need instructor approval first.

**Questions**
1. **The most important question:** What did you learn about astronomy? What did you see/hear that you already knew from class?
2. What were your overall impressions about the astronomy/science in the show/book?
3. According to what you already knew, was the astronomy accurate? If you don’t know, ask me specific questions related to the astronomy in the movie before you submit this.
4. Was watching/reading the show/book worthwhile, in terms of helping you with astronomy?
5. What was the most interesting aspect, related to astronomy?
6. What was the most confusing part about the astronomy?
7. Would you recommend it to others for astronomy learning? Why or why not?
8. What impressed you most about the science in the movie? Least? Why?
9. According to the scale at the top of this page, how many points do you deserve and how do you meet the criteria listed at the top of the page?

**Talks given by an expert in some field of astronomy**
Examples include: talks given during South Bay Astronomical Society meetings (SBAS). Meetings are typically held on the first Friday of each month, except when there is a nearby holiday, in which case it is the second Friday of the month.

**Questions**
1. Where is the speaker from and what is his or her area of expertise? Get this information from the speaker's introduction. If there is no introduction, specifically state that and try to answer this question based on the rest of the talk.
2. Beyond simply rephrasing the title, what is the overarching scientific question the speaker is trying to address?
3. Where does the data come from? (Which telescope, observatory, satellite, person, etc.?)
4. What makes this particular work complex or what difficulties did the speaker encounter in doing the work?
5. What does the speaker still not know about this area or what are the next steps in the project?
6. Ask a question to the speaker not on the list above and write down the answer.
7. What was the most interesting aspect of the talk?
8. What was the most confusing part of the talk?
9. According to the scale at the top of this page, how many points do you deserve and how do you meet the criteria listed at the top of the page?