

Origins 3B03 – 2012 – Presentations – Guidelines and Topics

1. Find a presentation partner.

2. Choose a date:

- The presentations will be held during class time from March 16 to March 27, in order to avoid the test/examination ban period. There will be three presentations per session. (Lectures will resume on March 29.)
- Email Alan Chen (chenal@mcmaster.ca) with your preferred date and names, or sign up on the sheet on his office door (ABB-260A).

3. Choose a topic from the list below:

- The presentations are meant to give you the opportunity to expand on the lecture material in a direction that suits your interests. Considering the diversity of science disciplines represented in our course – e.g., astronomy, biology, chemistry, earth sciences, environmental studies, physics – the topics were chosen accordingly. Hopefully, there's something for everybody.
- Each topic can be chosen only once, on a first-come-first-served basis.

4. Prepare your presentation:

- Plan on speaking for 12 minutes and answering questions for 3 minutes.
- You may use PowerPoint, in which case you should prepare a back-up set of transparencies in case we run into problems with the projector.
- You can expect that for some of the articles listed below, you may need to look up the original paper(s) or other references to add more substance to your presentation.
- In some cases, an article may have too much material to cover in only 12 minutes. You should then aim to focus and expand on a particular sub-topic in that paper that you find interesting.
- Aim the level of your presentation to your "colleagues", not to the instructors, keeping in mind the level of our course material and that we have students from just about every science department.

- Make sure that the division of labor between you and your partner in the preparation and presentation is fair and balanced. Each person should pull his/her weight.

5. Give your presentation:

- Please send Alan Chen your PowerPoint file no later than the evening before your presentation date, so that your talks can be uploaded to his laptop. This will save time during the transition between talks.

6. Evaluate presentations:

- Presentations will be evaluated by students and instructors. Instead of giving out participation marks for evaluating your colleagues' presentations, we'll run it on the honour system and assume that you are interested in the topics presented and in supporting your fellow students.
- Presentations will be evaluated on quality of content and delivery.

Presentation Topics:

1. *A hint of normality at last?* J. E. Norris, *Nature* **477** 37 (2011).
2. *Big Bang Points to Stellar Mix-Up*, P. Podsiadlowski and S. Justham, *Science* **314** 1551 (2006).
3. *Black Stars, Not Holes*, C. Barceló *et al.*, *Scientific American*, p. 39, October 2009.
4. *Cloudy with a Chance of Stars*, E. T. Young, *Scientific American*, p. 34, February 2010.
5. *Cosmic-Ray Origins*, W. R. Binns, *Science* **334** 1071 (2011).
6. *Galactic Paleontology*, E. Tolstoy, *Science* **333** 176 (2011).
7. *How to Blow Up a Star*, W. Hillebrandt, H. –T. Janka, and E. Müller, *Scientific American*, p. 42, February 2006.
8. *Isotopic hide and seek*, F. Albarède, *Nature* **444** 162 (2006).
9. *Nucleosynthesis in Binary Stars*, C. S. Jeffery, C. A. Tout, and J. C. Lattanzio, *Science* **311** 345 (2006).
10. *Rare isotopes in the cosmos*, H. Schatz, *Physics Today* **61** 40 (2008).
11. *Small-Scale Observations Tell a Cosmological Story*, P. A. Bland, *Science* **320** 61 (2008).
12. *Studying nuclear astrophysics at NIF*, R. N. Boyd, L. Bernstein, and C. Brune, *Physics Today* **62** 60 (2009).
13. *The first few microseconds*, M. Riordan and W. A. Zajc, *Scientific American*, p. 34, May 2006.
14. *The Mystery of Brown Dwarf Origins*, S. Mohanty and R. Jayawardhana, *Scientific American*, p. 40, January 2006.
15. *The Pristine Universe*, G. G. Kacprzak, *Science* **334** 1216 (2011).
16. *Through Neutrino Eyes*, G. B. Gelmini, A. Kusenko and T. J. Weiler, *Scientific American*, p. 38, May 2010.
17. *Unexpected Warm Water*, B. Gustafsson, *Nature* **467** 35 (2010).
18. *Where all the lithium went*, C. Charbonnel, *Nature* **442** 636 (2006).