

ESS 298: Classic Papers in Planetary Science

Spring 2013

Location TBD

Time TBD, Thu 1:00-3:00 pm suggested

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<http://www2.ess.ucla.edu/~jlm/teaching/classic>

Motivation

This reading seminar is designed to review seminal papers in planetary science, i.e., papers that have had an indelible impact on the field. Readings will be selected for their historical and pedagogical aspects and will be discussed in-depth in class. When appropriate a modern paper or a companion paper will be reviewed as well.

Format and Procedure

Papers will be assigned weekly and are available for download from <https://ccle.ucla.edu/course/view/13S-ESSCI298-1>. Every class participant is expected to read the assigned papers and to discuss the readings in class. Participants will make presentations from the readings on a rotating basis. Grading will be based on participation.

References

- [1] J. H. Oort. The structure of the cloud of comets surrounding the Solar System and a hypothesis concerning its origin. *Bull. Astron. Inst. Netherlands*, 11:91–110, January 1950.
- [2] C. Patterson. Age of meteorites and the earth. *Geochim. Cosmochim. Acta*, 10:230–237, October 1956.
- [3] S. J. Peale, P. Cassen, and R. T. Reynolds. Melting of Io by tidal dissipation. *Science*, 203:892–894, March 1979.
- [4] L. W. Alvarez, W. Alvarez, F. Asaro, and H. V. Michel. Extraterrestrial Cause for the Cretaceous Tertiary Extinction. *Science*, 208:1095–+, 1980.
- [5] D. J. Stevenson, T. Spohn, and G. Schubert. Magnetism and thermal evolution of the terrestrial planets. *Icarus*, 54:466–489, June 1983.
- [6] J. Laskar. A numerical experiment on the chaotic behaviour of the solar system. *Nature*, 338:237–+, March 1989.
- [7] M. Mayor and D. Queloz. A Jupiter-Mass Companion to a Solar-Type Star. *Nature*, 378:355–+, 1995.
- [8] M. G. Kivelson, K. K. Khurana, C. T. Russell, M. Volwerk, R. J. Walker, and C. Zimmer. Galileo Magnetometer Measurements: A Stronger Case for a Subsurface Ocean at Europa. *Science*, 289:1340–1343, August 2000.