



Kobe International School of Planetary Sciences 2006
Small Bodies in Planetary Systems

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in Kobe University, Kobe, Japan

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Pre-School Overview Notes

Notes

- All good teachers know that Powerpoint slides are a terrible way to teach. The way to do a good job with teaching is to use a blackboard and to derive and calculate things in class. Powerpoint packs too much material in too small a space and time and encourages distracting images and visuals. Writing by hand on a blackboard keeps the lecturer at a more human speed. The act of taking notes embeds the material more deeply in the brain because it is, on the part of the students, active rather than passive. And we all know that bad lecturers use Powerpoint as a cover to hide the fact that they don't know what they are talking about. Watch out for that from me and the other lecturers!
- The disadvantage with writing on the blackboard is that it is very slow. In a graduate class this is not too bad but in a winter school like this one in Kobe, we could not cover enough material in the limited time allotted to the lectures. So, even though I don't like Powerpoint so much, I am forced to use it by the format of the Kobe winter school. You'll get a lot of pretty visuals from me and the other lecturers, but you probably won't get much deep understanding out of it.
- The main things you can get from a winter school like this are A) a broad, shallow perspective of a subject to help you see what is known and what is mysterious and B) some energy and motivation, when you see how little we know about this subject.

Notes - Part 2

- You can make the Kobe Planetary Winter School a success by talking and interacting with me and the other lecturers. Questions and discussion and arguments are **STRONGLY** encouraged. Sure, language is a problem, but we'll figure it out.
- The following slides were requested by the meeting organizers to provide reading material before the lectures begin. Whether or not I will use these notes in detail depends on how much time I have between today (Nov 17) and the start of the winter school. Probably, I will have no time, and so the lectures will follow the outline here, more or less.

Notes - Part 3

- In the last few years, I've spent a lot of time writing articles that try to capture the essence of the science areas I'm working on. This helps me to understand what I'm doing and what to do next. The resulting papers provide a pretty good and mostly up-to-date overview of the subject in the right kind of style for this School.

So, I encourage you to look at some of these papers before the Winter School starts. They are all on my www site:

<http://www.ifa.hawaii.edu/faculty/jewitt/bib.html>

as indicated on the next page.

-David Jewitt

Kobe Reading Material - I

D. Jewitt, S. Sheppard and J. Kleyna. (2006). The Strangest Satellites in the Solar System. Scientific American, August issue. [*This paper tries to explain why the irregular satellites matter, scientifically, for a general audience. The direct readership of Scientific American is about 600,000 (several million once you count people reading old copies). This is 10,000 to 100,000 times the number of people who would normally read one of my papers.*]

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2006/JSK06.pdf>

D. Jewitt (2006). Kuiper Belt and Comets: An Observational Perspective. Saas Fee Lectures 2005 (eds. N. Thomas and W. Benz), in press. [*This is for a Winter School in Switzerland a little bit like the one in Kobe, but colder*]

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2006/J06b.pdf>

D. Jewitt, L. Chizmadia, R. Grimm and D. Prialnik (2006). Water in Small Bodies of the Solar System. In Protostars and Planets V (eds. B. Reipurth, D. Jewitt and K. Keil), Univ. Az. Press, Tucson, in press. [*The aim here is to synthesize work on watery bodies in the astronomical, meteorite and thermal modeling communities*].

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2006/JCGP06.pdf>

A. Delsanti and D. Jewitt (2006). The Solar System Beyond the Planets. In Solar System Update, edited by Ph. Blondel and J. Mason, Springer-Praxis, Germany, pp. 267-294. [*This book aims to compete with Annual Reviews of Astronomy and Astrophysics with a planetary focus.*]

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2006/DJ06.pdf>

D. Jewitt and S. Sheppard (2005). Irregular Satellites in the Context of Giant Planet Formation. ISSI Conference on the Outer Solar System. Ed. R. Kallenbach, Space Sci. Rev. 116, 441-456. [*More Swiss-connection: this one sets out our belief that the standard models for irregular satellite capture lack supporting evidence*]

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2005/JS2005.pdf>

Kobe Reading Material -2

D. Jewitt (2005) . From Cradle to Grave: The Rise and Demise of the Comets. In COMETS II, edited by M. Festou, H. Weaver and U. Keller. Univ. Az. Press, Tucson. *[I got the title from a Jet Li (2003) movie that I particularly liked: <http://www.imdb.com/title/tt0306685/>. The movie is good and the chapter is better. Comets, dormant comets, dead comets, main-belt comets, asteroids, Trojans, Centaurs- what s the difference?]*

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2005/J2005b.pdf>

D. Jewitt, S. Sheppard and C. Porco (2004). Jupiter's Outer Satellites and Trojans. Invited review for JUPITER, edited by Fran Bagenal, Cambridge University Press, Cambridge. *[Attempt to paint the irregular satellites and the Trojans with the same brush, drawing close connections between the two].*

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2004/JSP2004.pdf>

D. Jewitt (2004). Project Pan-STARRS and the Outer Solar System. Earth, Moon and Planets, 92, 465-476. *[Early paper outlining the kinds of science Pan STARRS can do: Pan STARRS 1 is almost ready to start taking data on Haleakala, Maui]*

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2004/J2004.pdf>

J. Luu and D. Jewitt (2002). Kuiper Belt. Annual Reviews of Astronomy and Astrophysics, 40, 63-101. *[Overview of the Kuiper belt for astronomers.]*

<http://www.ifa.hawaii.edu/faculty/jewitt/papers/2002/LJ02.pdf>