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12.001 Introduction to Geology
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SCIENTIFIC PAPER READING: CONTINENTAL GROWTH

Due: Wednesday, April 23, 2007

Each of you has been given a paper on crustal growth. We have every reason to think that the Earth began with no crust, and we know the amount it has now, but the rates and mechanisms of crustal formation through geological time are little understood and much speculated upon. There are therefore a range of techniques and conclusions in the papers on the subject.

Scientific papers are generally organized as follows:

1. Abstract
2. Introduction
3. Methods (details of procedures)
4. Results (objective description of data obtained)
5. Discussion (interpretation of data)
6. Conclusion

Some suggestions for reading a scientific paper (you don't need to follow these):

- Don't expect to understand it all; it takes years of reading the literature in one's own field to be able to follow papers easily or quickly.
- Start by reading the abstract. *Look up any words you don't know, or email me to ask about them.* In the rest of the paper you will probably be able to skip parts you don't understand with less detriment to overall understanding.
- Look over the paper in outline: What main point are they making in the first and last paragraphs of each section?
- Look over the figures: What main point are they making in each figure? (Many papers show their most important results in a key figure.)
- Read the introduction now that you have some idea what they have done and why. The introduction should give you a good overview of the field and how their work fits in.
- Read the conclusion.
- If you are up for it, work through other parts of the paper.

To hand in in class:

1. Two or three clear and complete sentences describing the conclusions of the paper.
2. A graph of their crustal growth curve, if they show one in the paper.
3. Description of something you think is weak or arguable in their results or conclusions (just a couple of sentences).
4. Description of something you think is strong and convincing in their results or conclusions (just a couple of sentences).
5. Description of the methods they use to come to their conclusions (a couple of sentences).

Be prepared to describe the paper to others in class.
