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- **NATURE**

Earthquake prediction: A seismic shift in thinking 1032

Earthquake researchers in the United States have long shunned the word 'prediction'. But, thanks to improved data and a change in public perception, cracks are beginning to appear in their resolve. David Cyranoski tracks the debate.

doi: 10.1038/4311032a

Shaking up seismology 1038

NAOMI ORESKES reviews *The Big One: The Earthquake That Rocked Early America and Helped Create a Science* by Jake Page & Charles Officer

doi: 10.1038/4311038a

Recent ice-rich deposits formed at high latitudes on Mars by sublimation of unstable equatorial ice during low obliquity 1072

BENJAMIN LEVRARD, FRANÇOIS FORGET, FRANCK MONTMESSIN & JACQUES LASKAR

doi: 10.1038/nature03055

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MATTHIAS KELLER, BIRGIT LANGE, KAZUHIRO HAYASAKA, WOLFGANG LANGE & HERBERT WALTHER

doi: 10.1038/nature02961

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doi: 10.1038/nature02925

- **SCIENCE**

Experimental Petrology of the 1991-1995 Unzen Dacite, Japan. Part I: Phase Relations, Phase Composition and Pre-eruptive Conditions FRANCOIS HOLTZ, HIROAKI SATO, JARED LEWIS, HARALD BEHRENS, and SETSUYA NAKADA *J. Petrology* published 28 October 2004, 10.1093/petrology/egh077

<http://petrology.oupjournals.org/cgi/content/abstract/egh077v1?ct>

Probabilistic Tomography Maps Chemical Heterogeneities Throughout the Lower Mantle Jeannot Trampert, Frederic Deschamps, Joseph Resovsky, and Dave Yuen *Science*. 2004; 306(5697): p. 853-856

<http://www.sciencemag.org/cgi/content/abstract/306/5697/853?ct>

Heterogeneity explains features of "anomalous" thermodynamics and statistics Stefan Gheorghiu and Marc-Olivier Coppens *Proc. Natl. Acad. Sci. USA* published 28 October 2004, 10.1073/pnas.0407191101

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Probabilistic Tomography Maps Chemical Heterogeneities Throughout the Lower Mantle Jeannot Trampert, Frederic Deschamps, Joseph Resovsky, and Dave Yuen *Science*. 2004; 306(5697): p. 853-856

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PHYSICS: Ancient Lessons for Our Future Climate Daniel P. Schrag and Richard B. Alley  
Science. 2004; 306(5697): p. 821-822  
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PALEOANTHROPOLOGY: New Species of Small Human Found in Indonesia Ann Gibbons  
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The timing of eukaryotic evolution: Does a relaxed molecular clock reconcile proteins and  
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