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?? SCIENCE

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066119.  
<http://highwire.stanford.edu/cgi/medline/pmid;15697446>

X Yang, S Du, and J Ma  
Yang et Al. Reply:.  
Phys Rev Lett 10 Dec 2004 93(24): p. 249802.  
<http://highwire.stanford.edu/cgi/medline/pmid;15697874>

D Sornette and G Ouillon  
Multifractal Scaling of Thermally Activated Rupture Processes.  
Phys Rev Lett 28 Jan 2005 94(3): p. 038501.  
<http://highwire.stanford.edu/cgi/medline/pmid;15698332>

A Saichev and D Sornette  
Andrade, Omori, and time-to-failure laws from thermal noise in material rupture.  
Phys Rev E Stat Nonlin Soft Matter Phys 1 Jan 2005 71(1 Pt 2): p.  
016608.  
<http://highwire.stanford.edu/cgi/medline/pmid;15697748>

M Santoro, E Gregoryanz, HK Mao, and RJ Hemley  
New phase diagram of oxygen at high pressures and temperatures.  
Phys Rev Lett 31 Dec 2004 93(26): p. 265701.  
<http://highwire.stanford.edu/cgi/medline/pmid;15697991>

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Phys Rev E Stat Nonlin Soft Matter Phys 1 Dec 2004 70(6-1): p. 061803.  
<http://highwire.stanford.edu/cgi/medline/pmid;15697393>

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An Acad Bras Cienc 1 Mar 2005 77(1): p. 137.  
<http://highwire.stanford.edu/cgi/medline/pmid;15692684>

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Science. 2005; 307(5711): p. 904-907  
<http://www.sciencemag.org/cgi/content/abstract/307/5711/904?ct>

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<http://www.sciencemag.org/cgi/content/abstract/307/5711/879?ct>

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Science. 2005; 307(5711): p. 914-917  
<http://www.sciencemag.org/cgi/content/abstract/307/5711/914?ct>

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<http://www.sciencemag.org/cgi/content/abstract/307/5711/917?ct>

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Science. 2005; 307(5711): p. 861-862  
<http://www.sciencemag.org/cgi/content/summary/307/5711/861?ct>

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Science. 2005; 307(5711): p. 910-914  
<http://www.sciencemag.org/cgi/content/abstract/307/5711/910?ct>

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<http://www.sciencemag.org/cgi/content/summary/307/5711/811n?ct>

Ear Origins  
Science. 2005; 307(5711): p. 811e  
<http://www.sciencemag.org/cgi/content/summary/307/5711/811e?ct>

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J. Plankton Res. published 7 February 2005, 10.1093/plankt/fbi001  
<http://plankt.oupjournals.org/cgi/content/abstract/fbi001v1?ct>

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Waste Management Research. 2005; 23(1): p. 72-78  
<http://wmr.sagepub.com/cgi/content/abstract/23/1/72?ct>

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