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Curious cloud formations linked to quakes

11 April 2008 by [Lynn Dicks](#)

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CAN unusual clouds signal the possibility of an impending earthquake? That's the question being asked following the discovery of distinctive cloud formations above an active fault in Iran before each of two large earthquakes occurred.

Geophysicists Guangmeng Guo and Bin Wang of Nanyang Normal University in Henan, China, noticed a gap in the clouds in satellite images from December 2004 that precisely matched the location of the main fault in southern Iran. It stretched for hundreds of kilometres, was visible for several hours and remained in the same place, although the clouds around it were moving. At the same time, thermal images of the ground showed that the temperature was higher along the fault. Sixty-nine days later, on 22 February 2005, an earthquake of magnitude 6.4 hit the area, killing more than 600 people.

In December 2005, a similar formation again appeared in the clouds for a few hours. Sixty-four days later, an earthquake of magnitude 6 shook the region (*International Journal of Remote Sensing*, vol 29, p 1921).

Guo and Wang suggest that an eruption of hot gases from inside the fault could have caused water in the clouds to evaporate. Another idea is that ionisation may be involved: Friedemann Freund at the NASA Ames Research Center in Moffett Field, California, recently demonstrated that when rocks are squeezed, positively charged ions form in the air above. The trouble is that ions usually help to form clouds, not dissipate them.

The authors say that if recognisable cloud formations precede large quakes, they could be used for prediction, but other seismologists are sceptical. "There is no physical model that explains why something would suddenly occur two months before an earthquake, and then shut off and not occur again," says Mike Blanpied of the [US Geological Survey's Earthquake Hazards Program](#).



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About "curious Clouds Linked To Quakes"

Fri Apr 11 07:14:57 BST 2008 by **Dr. Guo**

Dear editor,

I saw the news about the Curious clouds linked to quakes. I am the author of this paper. I want to do some earthquake predictions to the editor with satellite cloud image to show that our method is useful. If you are interested, please send me email.

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About

Fri Apr 11 16:12:27 BST 2008 by **Brent Austin**

Dear Dr. Guo: Please read my comment about the HAARP machines, antennas in Alaska, Russia, Australia etc.

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About

Mon Apr 14 18:55:01 BST 2008 by **Gemgoddess**

Good observation!

How do I get my email address to you without posting it on the web for all to see?

thank you

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About "curious Clouds Linked To Quakes"

Wed Jan 20 22:31:43 GMT 2010 by **Barbara**

Did you see the cloud pix taken from the cruise ship Noordam at the time of the first Haiti quake January 12? Have you seen the readings of the HAARP magnetometer U of Alaska on 1/12 and at the time of the new aftershock?

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Unusual Clouds

Fri Apr 11 12:28:53 BST 2008 by **Jane Fleming**

The Cloud Appreciation Society would be most interested, and their member photographers too. Not just geologists.

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Unusual Clouds

Thu Jul 17 05:01:24 BST 2008 by **Kum Ken-chee**

I have seen unusual cloud formation in KL, Malaysia. Could it be linked to earthquake? There is no plate tectonics crossing Malaysia but there has been mild earthquakes of M3 reported. How can the stress move inland on the plates? How can I send these photographs for your study and comments?

Tidal power? No thanks



16:58 31 March 2010
The north of Scotland has been described as the Saudi Arabia of marine power – but there isn't much energy to be had

from any sea, says **Hans van Haren**

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Earthquake Prediction

Fri Apr 11 13:41:14 BST 2008 by **Ian Clarke**

I am sure there will always be the curious and wacky ways in which earthquakes might be 'predictable'. However, no reliable and repeatable method of prediction has been thoroughly and scientifically proven to date. Whilst prediction is the holy grail of geohazard assessment, it can take away resources from important forecasting and mitigation research.

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Earthquake Prediction

Fri Apr 11 13:57:02 BST 2008 by **Kb**

Isn't that what Dr Guo wants to do? See whether his method is indeed repeatable.

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Earthquake Prediction

Fri Apr 11 17:32:26 BST 2008 by **Allen**

He's making an economic, not a scientific, argument.

"it can take away resources from important forecasting and mitigation research."

Note the put down word 'wacky' though. It is an attempt to win through ridicule. That is simply one of the techniques used by people who are in an economic system that has limited resources.

The objection to the scientific fishing expeditions (be it odd clouds, or things that really paid off but were ridiculed at the time such as angiogenesis/cancer or heliobacter research) is a disguised economic argument.

What is the harm in a scientific expedition to look for for better proof upon some indication? It takes cash away from something else.

This cloud thing strikes me as highly worthwhile. If studied carefully, we will learn something interesting even if it does not provide earthquake prediction. Do you proceed with inquiry based on the little you know though?

It is THAT point of economic decision that is not WITHIN the scientific method. Deciding what is important or likely to yield results and therefor to spend time on is not scientific. Calling this idea 'wacky' seems rude and irresponsible to me, it may not to the person who said it. There is no Hypothesis at this point so there is no scientific basis for objection. This is simply a political fight for resources. I say step out and take a chance.

Academics fight like starving dogs over a bone. Fighting dirty by trashing the other guy is second nature. If you can't win these resources by hook or crook, you won't survive. Therefore, those at the top are often the best at being the meanest and the most petty. Simple Darwinism. :-)

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Earthquake Prediction

Fri Apr 11 23:50:07 BST 2008 by **Steve**

There may well be something in this observation. An earthquake is essentially a significant release of accumulated strain. I understand there is evidence to show major earthquakes are often proceeded by prior

multiple shifts which may be too small to register seismographically. There is also evidence to show that increased emissions from depth of helium and radon isotopes (accumulated from alpha decay of radium-224, 226 and 228 in the thorium and uranium decay chains) can be observed e.g. In springs can precede earthquakes. Presumably this arises from a step increase in partings, brecciation etc. A significant 'puff' of previously trapped helium and (to a lesser extent) radon isotopes along a major fault line e.g. From a chain of multiple minor shifts would be warmer and lighter than ambient air and rise rapidly directly above the fault line. This may be enough to punch out a line in a cloud mass sitting over the fault line.

BTW, I broadly agree with your comments Allen. I have observed quite often those who rise most rapidly in academia (other than the few who are genuinely talented and technically outstanding) are simply modestly intelligent sociopaths. Sadly, the academic environment usually permits such persons to behave with appalling meanness, childishness and even cruelty for decades.

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Earthquake Prediction

Sun Apr 13 14:04:45 BST 2008 by **Tom Lima**

I like your argument. It is applicable to many problems we have in research.

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Earthquake Prediction

Sun Apr 13 17:03:20 BST 2008 by **Kevin D.**

Try this: I am sure there will always be the curious and wacky ways in which solar eclipses might be 'predictable'. However, no reliable and repeatable method of prediction has been thoroughly and scientifically proven to date. Whilst prediction is the holy grail of crop failure assessment, it can take away resources from important forecasting and mitigation research.

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