

Saturday, 18 February 2006, 15:36 GMT

## **Earth 'on fast track' to warming**

**By Paul Rincon**

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**Greenhouse gases are being released 30 times faster than the rate of emissions that triggered a period of extreme global warming in the Earth's past.**

That is the conclusion of scientists who presented results at a conference in St Louis, in the US.

Emissions that caused a global warming episode 55 million years ago were released over 10,000 years.

Burning fossil fuels is likely to release the same amount over the next three centuries, the scientists claim.

Professor James Zachos of the University of California at Santa Cruz studied the period of global warming known as the Palaeocene-Eocene Thermal Maximum (PETM).

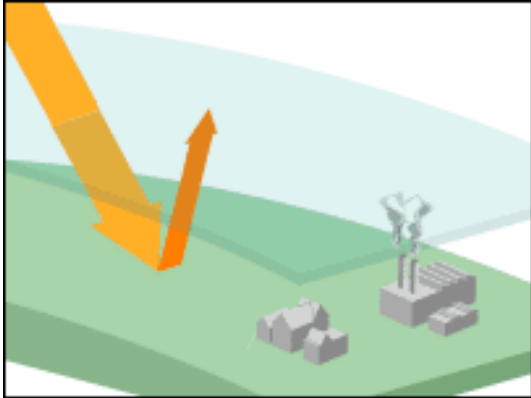
Temperatures shot up by 5C (9F) during this episode, driven by a massive release of carbon dioxide and methane into the atmosphere.

### **Crossed threshold**

By probing sediments on the ocean floor, Professor Zachos was able to determine that about 4.5 trillion tonnes of carbon

entered the atmosphere over a period of 10,000 years.

If present trends continue, this is the same amount that will be emitted by burning fossil fuels during the next 300 years, according to the UC Santa Cruz geologist.



The fear for climate scientists is that higher temperatures could slow down ocean mixing, reducing the ocean's capacity to absorb CO<sub>2</sub>. This could cause "positive feedback", with reduced absorption leaving more CO<sub>2</sub> in the air, causing more warming.

"Records of past climate change show that change starts slowly and then accelerates," he said.

"The system crosses some sort of threshold."

On Thursday, researchers unveiled research that Greenland's glaciers were sliding into the sea much faster than they were a decade ago.

Professor Zachos presented his research at the American Association for the Advancement of Science annual meeting in St Louis.