

## **Einstein and the Science of Climate Change**

Wednesday August 22<sup>nd</sup> 2007.

Coles theatre, Powerhouse Museum, Ultimo Sydney

6pm for a 6.30 start

This is a FREE event from the Powerhouse Museum and proudly supported by the Australian Institute of Physics.

Part of the [Ultimo Science Festival](#), a National Science Week event.

We all know we should be scared of the effects of rising levels of Carbon dioxide, climate change and global warming – BUT how can scientists be so sure that they have got it right, or wrong. If you don't know your orbital dynamics from your albedo, or get tongue tied talking about black body radiation then this talk is for you.

In the third annual Einstein Lecture Dr Mark Butler, winner of The Prime Minister's award for science education will use demonstrations to demystify the physics and techniques in the arsenal of science.

## **Einstein and the Science of Climate Change**

The comfortable surface temperature the Earth has enjoyed for thousands of years is largely due to a natural atmospheric greenhouse effect. But concern is growing that human activity is enhancing the greenhouse effect to such a degree that the Earth's climate is changing.

Einstein was a humanitarian who courageously opposed militarism, war, nuclear proliferation and the suppression of freedom of speech. Where would he have stood today on the issue of climate change? One suspects that, once he was convinced that the science behind the climate change predictions was sound, he would have added his voice to those calling for urgent global action.

To understand how the climate can change we must first understand a range of scientific concepts, such as; electromagnetic radiation, solar activity, cosmic rays, light scattering, molecular absorption spectroscopy, atmospheric and oceanic circulation, systems in dynamic equilibrium and tipping points. In this presentation the history of climate change and the fundamental scientific concepts responsible for climate change will be examined.

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