

For the record

This is basically simple physics. It is not as if it is something strange or mysterious that people cannot explain to you

The economist **Nicholas Stern** quoted in the Guardian

Stern, who studied maths and physics as an undergraduate and in 2006 published a review on the economics of global warming, says that no-one would go to politicians for information about the latest science or climate change. Instead, people should heed the warning from scientists who say that the greenhouse effect exists and is experimentally observable.

We must fundamentally rethink the objective of energy policy in this country

Lord **Browne** president of the Royal Academy of Engineering quoted in the Guardian

Browne, the physicist who spent 12 years as boss of oil giant BP, says there is a growing risk that many wind farms will not be built due to rising costs and expensive credit caused by the recession.

There is a lot of truth to the statement Greens are people who never had to worry about their grocery bills

Physicist **Freeman Dyson** quoted in the New York Times

In an 8000-word profile, Dyson says that without coal, moving many people in India and China out of poverty and into middle-class prosperity would not have happened.

Is it important? I doubt it. But I think it is science

Robert Park from the University of Maryland in his What's New bulletin

Park was commenting after a session held at the annual meeting of the American Chemical Society in March to mark the 20th anniversary of the Utah announcement of the discovery of cold fusion. He was referring to papers on what are now dubbed "low-energy nuclear reactions".

We do not do this for money, or awards, we do it for love

Mildred Dresselhaus of the Massachusetts Institute of Technology quoted in Science

Dresselhaus, who won the 2009 Vannevar Bush Award from the US National Science Board for her work in condensed-matter physics and advocating opportunities for women in science, was underlining the importance of mentoring students and getting them excited about science.

Seen and heard



Toilet troubles

Silly rows over who can use the toilet are not what one would expect of astronauts. But according to the BBC, Russian cosmonaut Gennady Padalka was left fuming last month after he was refused access to a US toilet and exercise bike by his American colleagues while aboard the International Space Station (ISS). He told Russia's *Novaya Gazeta* newspaper that the lack of sharing was lowering the morale of the crew. We can only hope that lavatory rights have been sorted out by the time Indian astronauts arrive at the ISS, as staff at the country's Defence Research Laboratory (DFRL) in Mysore have been told to create a curry fit for space to support India's upcoming manned space programme. Researchers from the DFRL told *The Times* that a spicy meal would buoy homesick astronauts, but also warned that "we cannot afford the stomach to be strained". Perhaps the DFRL should keep an eye on the new underpants that Japanese astronaut Koichi Wakata (pictured above) was testing last month during a week aboard the ISS. The pants, which contain antibacterial polymers, can be worn for up to seven days without needing to be changed, and are designed to absorb sweat and "other liquids" as well as insulating the body. They are also flame resistant, which could be handy for any unwanted curry-related incidents.

April fools

Physicists provided a few of their own April fools this year, including a number of suspect papers that appeared on the *arXiv* preprint server. One paper – supposedly by the *Galaxy Zoo* team – identified a new, rare, class of galaxy clusters (arXiv:0903.5377) that have gone "unnoticed despite their unusual properties". One set of galaxies, for example, seemed to spell out "delays possible for 7 Gyr" and "we apologise for the inconvenience". The researchers claimed their findings were "conclusive evidence for intelligent life elsewhere".

Meanwhile, in a theoretical model based on string theory, Robert Scherrer from Vanderbilt University in Nashville claimed to have evidence that π varies with time (arXiv:0903.5321). He said his model was backed by "measurements" showing that π was 3.125 in ancient Babylon but had risen to 3.14159265359 in 15th-century India. Scherrer concludes that the evidence of the variation of π "leads naturally to an accelerated expansion for the universe". Not quite as funny was the *Fermilab Today* website, which ran a spoof homepage on 1 April containing articles written in French and a piece about a French child discovering a flaw in the design of the Large Hadron Collider at CERN. It also reported that Fermilab had moved 18 miles west to a new location. Ho, ho – not.

Spot kick

Missed that penalty kick at last weekend's football game? Well now sports scientist Tim Cable at Liverpool John Moores University has come up with the perfect formula that will see you hit the back of the net every time. After hours of painstaking analysis of football footage, Cable has determined that a penalty taker should take a run up of five steps, come in at an angle of 25° and hit the ball at 29 m s^{-1} . The penalty taker should then aim within 0.5 m of the crossbar and one of the posts to score every time. Roberto Baggio, Gareth Southgate, John Terry – are you listening?



Top toy

Particle Zoo, a firm based in Los Angeles that sells soft toys of your favourite sub-atomic particles (see *Physics World* April 2008 p3), has been quick off the mark after physicists at Fermilab provided the first unambiguous evidence that the top quark can be produced individually rather than in pairs (see *Physics World* April p4). It was already possible to buy the top quark, but Particle Zoo has now created the "decaying top quark" to honour the new results. Unzip the back of the toy and out pop an antimuon and a muon-neutrino. The one and only single decaying top quark available has since been bought by Heidi Schellman from Northwestern University, who commissioned the new toy from Los Angeles based artist and "particle zookeeper" Julie Peasley. "But I am certainly happy to make more if anyone wants one," Peasley told *Physics World*.
● www.particlezoo.net