

SEVEN DAYS

The news in brief

RESEARCH

Fracking tremors

A British energy company says that its hydraulic fracturing ('fracking') project probably caused the cluster of small earthquakes that struck Lancashire, UK, this spring. Cuadrilla Resources, based in Lichfield, had commissioned independent studies to investigate the quakes, the largest of which was of magnitude 2.3. The 2 November synthesis report says that it should be safe to continue operations, although protest groups disagree. Concerns have been raised in many countries about the safety of fracking, a technique in which high-pressure fluids are pumped into shale to fracture the rock and force out natural gas. See go.nature.com/p5fj1q for more.

EVENTS

Heavenly kiss

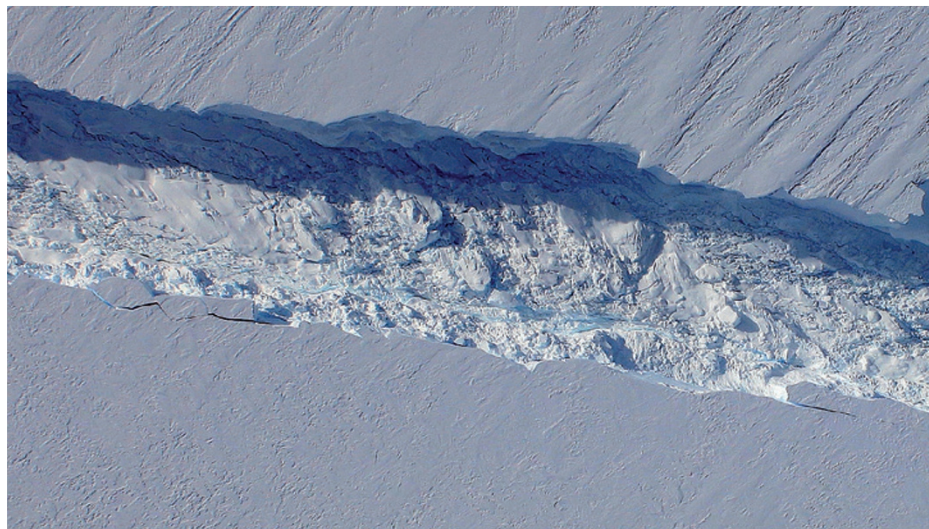
China's unmanned Shenzhou 8 spacecraft docked with its Tiangong 1 module on 2 November, marking the country's first success at the delicate procedure, which was broadcast live on state television. After completing what state media referred to as a 'kiss' in space, both craft are now orbiting Earth together. Two more missions, perhaps

NUMBER CRUNCH

\$131 bn

Lifetime sales of Pfizer's cholesterol-lowering drug Lipitor (atorvastatin), the world's top-selling prescription medicine. It loses patent protection from 30 November.

Source: Reuters, IMS Health



NASA/DMS

How icebergs begin

A seasonal ice-survey flight has spotted the birth signs of a large iceberg in West Antarctica: a crack at least 18 miles long in Pine Island Glacier, which sticks out from the Amundsen Sea coast on the west of the continent. The rift (pictured, around 80 metres wide and 50 metres deep) was first seen in mid-October

by NASA's Operation IceBridge project, which released images last week. The iceberg that eventually calves from the breaking ice shelf will cover around 880 square kilometres, project scientists said. Pine Island Glacier is rapidly retreating, accounting for a large part of West Antarctica's ice loss.

carrying astronauts, will follow in 2012. If the next stages of testing go to plan, China will launch further modules to be assembled into a space station by 2020.

Back from 'Mars'

Six men have survived 520 days cooped up in 3 small rooms at the Institute of Biomedical Problems in Moscow, where they were simulating the isolation of a journey to Mars and back. On 4 November, the crewmen — three of whom were Russian, one Chinese, one French and one Italian — emerged pale but smiling from the capsule they had entered in June 2010. Many observers found fault with the exercise's lack of realism, saying that the mission could not simulate

weightlessness, true danger or the pressure and motivation of a real journey to Mars. See go.nature.com/1zquiu for more.

Nuclear restart

For the first time since the Fukushima disaster, a Japanese nuclear reactor that had gone into shutdown has been brought back online. The Genkai Nuclear Power Plant in southwestern Japan was shut down briefly in October because of a technical fault, and its restart last week would normally be unremarkable. But concerns over nuclear safety mean that no other plants closed since the earthquake and tsunami on 11 March have been allowed to restart. Of Japan's 54 nuclear reactors, 43 are currently offline.

Asteroid fly-by

Marshalling everything from major radar facilities to backyard telescopes, astronomers geared up this week for a fantastic view of an asteroid called 2005 YU55. The 400-metre-diameter rock passed Earth on 8 November just 320,000 kilometres away, or 0.85 of the distance between Earth and the Moon. It is the closest pass by an asteroid this big since 1976, and there won't be another until 2028. See go.nature.com/ohn6zt for more.

BUSINESS

Avandia fine

Drug giant GlaxoSmithKline (GSK) announced on 3 November that it has agreed to pay US\$3 billion

R. HAHN/FERMILAB

to settle a bevy of US federal investigations into the way it has developed and marketed some of its biggest-selling drugs. Foremost among these is Avandia (rosiglitazone), a once-dominant diabetes drug, sales of which were banned in Europe and restricted in the United States last year after concerns that it increased risks of heart attack and stroke. The company, headquartered in London, came under fire in July 2010, when a US Senate committee concluded that GSK had known about the drug's heart risks for more than a decade without reporting them to regulators. See go.nature.com/iphvp for more.

PEOPLE

SLAC head leaves

Persis Drell is stepping down as the director of the SLAC National Accelerator Laboratory in Menlo Park, California; the lab's operator, Stanford University, announced the decision on 1 November. Drell became SLAC's fourth director in 2007, succeeding Jonathan Dorfan. She will stay on until a replacement is found, and then return to research at Stanford.

Nobel physicist dies

Atomic physicist Norman Ramsey, who shared the 1989 Nobel Prize in Physics,



died on 4 November, aged 96. After working on radar and the atomic bomb in the Second World War, Ramsey (**pictured**) moved to Harvard University in Cambridge, Massachusetts, where he developed improved methods for probing atomic structure by measuring the response to electromagnetic radiation. His discoveries, which won him the Nobel prize, led to the caesium atomic clock and the hydrogen maser. Ramsey also helped to found Brookhaven National Laboratory in Upton, New York, and Fermilab in Batavia, Illinois.

POLICY

Drug approvals rise

The US Food and Drug Administration approved more innovative drugs this year than in any year of the past decade, except for 2009, the agency said last week. In the US government's

fiscal year 2011, which ended on 30 September, the agency approved 35 original medicines, 24 of which were authorized in the United States before anywhere else. Ten were for rare, or 'orphan', diseases and two were 'personalized' medicines: treatments for melanoma and lung cancer that were approved along with diagnostic tests to identify the patients that they are most likely to help.

Public integrity

More US agency policies on scientific integrity seem likely to become public after John Holdren — director of the White House Office of Science and Technology Policy (OSTP) — encouraged officials to release the tightly guarded guidelines. In a 31 October letter, Holdren said he had set a 17 December deadline for agencies to submit revised policies that take account of OSTP feedback on earlier drafts. Nineteen agencies have policies in the works, but so far only six are publicly available. Critics say that the policies lack provisions to protect whistleblowers from retaliation.

Future medicine

The US National Research Council (NRC) has called for a network that would connect patients' health records with

COMING UP

12–16 NOVEMBER

The Society for Neuroscience holds the world's largest annual neuroscience meeting in Washington DC. A featured panel looks at the interplay between economics and the brain. www.sfn.org/am2011/

16 NOVEMBER

The Commission on Sustainable Agriculture and Climate Change — a global task force of senior scientists and government advisers — presents recommendations for avoiding future food crises. ccafs.cgiar.org/commission

layers of data on molecular tests, genetics, and social and physical environments. This, the NRC said in a report published on 2 November, would enable treatments to be personalized for patients, ushering in a new taxonomy of human disease based on molecular origins rather than on physical signs and symptoms. The report was requested last year by the National Institutes of Health. See go.nature.com/ayesl2 for more.

Carbon tax

Australia will introduce a tax on carbon dioxide emissions from 1 July 2012, after the legislation passed its final barrier — approval by the Senate — on 8 November. The bill had been passed by the House of Representatives in October. The tax, of Aus\$23 (US\$24) per tonne for the country's top 500 emitters, will increase by 2.5% a year above inflation until an emissions-trading scheme replaces it in 2015.

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TREND WATCH

Efforts to eradicate polio are bearing fruit in India, one of four countries (with Nigeria, Pakistan and Afghanistan) where wild poliovirus (WPV) is endemic. India reported only one confirmed WPV case this year, in January; the absence of the virus, particularly during India's high-transmission season between June and November, is unprecedented. But India is a lone bright spot: other countries in which polio still persists have already had more cases than this time last year (see chart).

POLIO CLINGS ON

India seems on track to stop poliovirus transmission this year, but the disease is springing back in other countries.

