

EVENTS

Fatal quake

A deadly magnitude-8.2 earthquake struck the southern coast of Mexico on 7 September, killing dozens of people and injuring at least 200. The tremor prompted mass evacuations along the country's Pacific coast, as scenes of demolished buildings, teetering streetlight posts and blacked-out subway stations circulated on social media. The region in which the earthquake struck is one of the most active seismic zones in Mexico, and includes the area where the Cocos plate dives under the North American plate. But this quake occurred within the Cocos plate, as it warped or bent, not at the boundary with the North American plate, according to the US Geological Survey. Seismologists say this type of fault does not usually produce such large earthquakes, and they are not yet sure why this tremor was so massive (see go.nature.com/2xi9wga for more).

AWARDS

Lasker honours

The Lasker Awards — prestigious medical prizes often called the American Nobels — are honouring women's health this year, the Lasker Foundation announced on 5 September. One award went to Douglas Lowy and John Schiller at the US National Cancer Institute for their foundational research on vaccines against human papillomavirus (HPV). The virus is a leading cause of cervical cancer, and studies suggest that HPV infections also increase a woman's risk of acquiring HIV. The vaccines are now recommended in the United States for people aged 26 and younger. Another prize went to Planned Parenthood, a US-based non-profit



GERBEN VAN ES/DUTCH DEFENSE MINISTRY/AFP/GETTY

Hurricane Irma wreaks lethal havoc

Caribbean islands and the US state of Florida are reeling in the wake of Hurricane Irma, which has killed at least 30 people since it first made landfall in Barbuda on 5 September. At its height, Irma was a category-5 storm, with winds that reached speeds of more than 297 kilometres per hour. The hurricane caused extensive damage on its march through the Caribbean, levelling

buildings, downing power lines and flooding roads and homes. Photos and reports from Barbuda, Anguilla and St Martin reveal barely habitable islands where many people are without shelter, food or even clean water days after the storm hit. As *Nature* went to press, Irma had been downgraded to a tropical depression, and was churning its way through Georgia.

organization that strives to make reproductive health-care services, including HPV vaccines and cervical-cancer screening, available to all — including those without health insurance.

China award

The winners of the Future Science Prize, three awards for discoveries made in China, were announced on 9 September. Shi Yigong of Tsinghua University in Beijing won the life-science category for work on the eukaryotic spliceosome, while Pan Jian-Wei at the University of Science and Technology of China in Hefei netted the

physical-science prize for work on quantum optical technology. Xu Chenyang of Peking University in Beijing won the mathematics and computer-science award for research on birational algebraic geometry. Each will receive US\$1 million, and an awards ceremony will be held in Beijing on 29 October.

Balzan prizes

The 2017 Balzan prizes have been awarded to astrophysicist Michaël Gillon at the University of Liège, Belgium, for his discoveries of exoplanets around nearby stars, and to the immunologists Robert

Schreiber at Washington University in St. Louis, Missouri, and James Allison at the University of Texas MD Anderson Cancer Center in Houston for their research into how tumours evade immune control and the development of cancer immunotherapies. Each prize comes with 750,000 Swiss francs (US\$790,000), half of which must be given to research projects, preferably carried out by young scientists. The Balzan Foundation, based in Zurich, Switzerland, changes the research areas it recognizes each year. In 2018, they will include fluid dynamics and chemical ecology.

ENVIRONMENT

Record wildfires

While the southeastern United States has endured two category-4 hurricanes within two weeks, the western states have been going up in flames. Fires have torched about 3.3 million hectares so far this year — an area larger than the US state of Maryland — and the country is set to exceed the annual average of hectares burnt over the past 10 years. Flames destroyed a historic, 103-year-old hotel in Montana's Glacier National Park in late August, and a wildfire continues to burn in Sierra National Forest near Yosemite National Park in California. Los Angeles saw its largest fire on record in early September, with more than 2,000 hectares destroyed, as did British Columbia in Canada, where about 895,000 hectares have burnt.

PEOPLE

Nobel winner dies

Nobel-prizewinning physicist Nicolaas Bloembergen (pictured) died on 5 September, aged 97. The Dutch-born American won the 1981 prize jointly with Arthur Leonard Schawlow for his contribution to the development of laser spectroscopy, a technique used to study the properties



of atoms. Bloembergen, who spent more than 40 years of his career at Harvard University in Cambridge, Massachusetts, explored ways to make lasers in a wider range of wavelengths, and carried out pioneering early experiments in nuclear magnetic resonance.

POLICY

AI computing deal

Computing giant IBM announced on 7 September that it plans to invest US\$240 million in research on artificial intelligence (AI), in a ten-year partnership with the Massachusetts Institute of Technology in Cambridge. The deal aims to recruit at least 100 AI experts from industry and academia to a new MIT-IBM Watson AI Lab. The partnership will seek to

create machine-learning algorithms and AI hardware. It will also study the social impacts of AI and its business applications, focusing on health care and cybersecurity. The announcement comes after five years of declining revenues for IBM, in an industry where talent is scarce and in high demand from competitors such as Google and Microsoft.

US budget

US President Donald Trump and Congress have reached a temporary agreement to fund the government until 8 December. On 8 September, Trump signed into law a stopgap spending bill that would continue the current funding levels for federal agencies into the start of the 2018 fiscal year, which begins on 1 October.

Brexit plans

The British government has laid out how it would like to handle future scientific relationships with the European Union after it leaves the bloc in 2019. A policy document published on 6 September lacks specific proposals but says the United Kingdom would “welcome discussion” about remaining a member of the huge Horizon 2020 funding programme, as well as involvement in space, nuclear and defence

research-and-development programmes. But it warns that any payments required to remain part of such projects would be weighed “against other spending priorities”. See page 140 for more.

FACILITIES

Deep-ocean floats

The US National Oceanic and Atmospheric Administration (NOAA) has partnered with Microsoft co-founder Paul Allen to probe the depths of the Atlantic Ocean east of Brazil. Under the joint initiative, which was announced on 7 September, Paul G. Allen Philanthropies, based in Seattle, Washington, will provide US\$4 million to help NOAA deploy 25 autonomous floats. Known as Deep Argo, the network will collect data on water temperature and salinity down to 6,000 metres every 15 days, allowing researchers to study ocean circulation and long-term climate trends. The project builds on Argo, a collection of nearly 4,000 floats that monitor the upper 2,000 metres of the ocean.

Canadian telescope

Construction of the Canadian Hydrogen Intensity Mapping Experiment (CHIME) was completed on 7 September. The radio telescope, which is near the town of Penticton, British Columbia, will allow astronomers to study hydrogen emissions from ancient galaxies to probe the rate of expansion of the early Universe. The telescope will also hunt for mysterious signals known as fast radio bursts (FRBs), with researchers hoping to see as many as a dozen per day. Testing and calibration will now begin, with hydrogen mapping and FRB searches expected to start by the end of the year.

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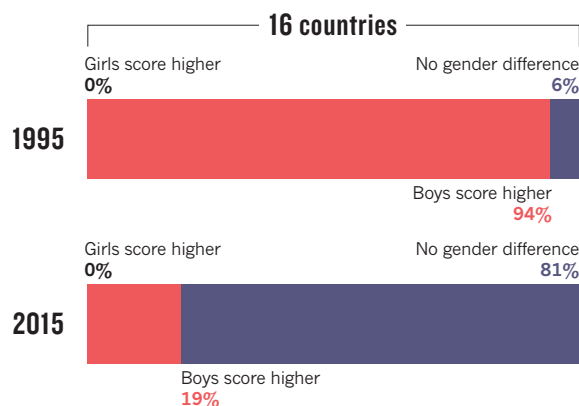
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TREND WATCH

A report into the gender gap in science education contains some good news. *Cracking the Code*, released by the United Nations Educational, Scientific and Cultural Organization on 28 August, found that in high- and middle-income countries, the gap in school test scores has shrunk massively since 1995. In 13 out of 16 countries, the study found no difference in science test scores between girls and boys. But girls in regions such as Latin America and sub-Saharan Africa remain particularly disadvantaged.

SCIENCE GENDER GAP SHRINKS IN SCHOOLS

Percentage of countries in which girls or boys score higher in science at grade 8.



CORRECTION

The Seven Days item 'Brexit plans' (*Nature* **549**, 137; 2017) erroneously stated that the United Kingdom would leave the European Union next year. In fact, it is expected to leave in 2019.