

News in brief

Has Twitter just had its saddest fortnight ever?

Researchers aiming to quantify global happiness using social media have called the period starting on 26 May “the saddest two weeks” on Twitter.

Chris Danforth and Peter Dodds, applied mathematicians at the University of Vermont in Burlington, have been tracking public sentiment since late 2008 using the ‘hedonometer’, a tool that rates the words in 10% of tweets each day according to how positive or negative they are. In mid-March, as the COVID-19 pandemic swept the Western Hemisphere, the tool charted a sustained dip in the global mood. Then, the protests following the killing of George Floyd in May set off a second wave of negative sentiment unlike anything Danforth and Dodds had ever seen.

Danforth and Dodds were quick to declare this “the saddest two weeks on Twitter”. But Munmun De Choudhury, a computer scientist at the Georgia Institute of Technology in Atlanta, says that changing demographics of Twitter users, as well as the changing ways in which people use Twitter, make it hard to say for sure whether it has been the platform’s saddest period – and there’s still a lot of 2020 to go.



BIZARRE QUANTUM MATTER CREATED IN SPACE

Physicists have created an exotic state of matter in space – a feat that will allow them to probe quantum behaviour in detail.

Researchers created an ultracold Bose–Einstein condensate using NASA’s US\$100-million Cold Atom Lab (CAL) on the International Space Station. The findings are a proof-of-principle that show the laboratory can exploit the microgravity of space to create phenomena that would be impossible on Earth. “I think it’s just an amazing achievement,” says Courtney Lannert, a theoretical physicist at Smith College in Northampton, Massachusetts.

Bose–Einstein condensates form when clouds of atoms are chilled to nearly absolute zero. At this temperature, the particles’ quantum nature dominates. Earth’s gravity quickly disperses these clouds, but in microgravity, the condensates last longer.

In the latest work, physicists produced condensates that survived for more than a second at 200-trillionths of a degree above absolute zero, on a par with some of the best experiments on Earth (D. C. Aveline *et al. Nature* **582**, 193–197; 2020). In future experiments, the team plans to make condensates that last for 5 seconds at 20-trillionths of a degree, says Kamal Oudrhiri, CAL mission manager at the Jet Propulsion Laboratory in Pasadena, California.

THE MANY MOODS OF TWITTER

The hedonometer takes the temperature of 10% of tweets from any given day by comparing the language in each post with a database of more than 10,000 words scored on a 9-point scale for positivity.



DATA SOURCE: [HTTPS://HEDONOMETER.ORG](https://hedonometer.org); PHOTO: NASA