

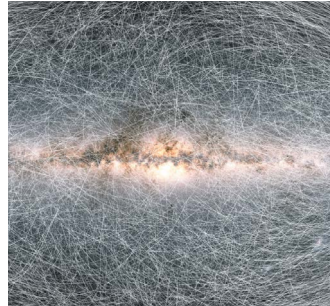
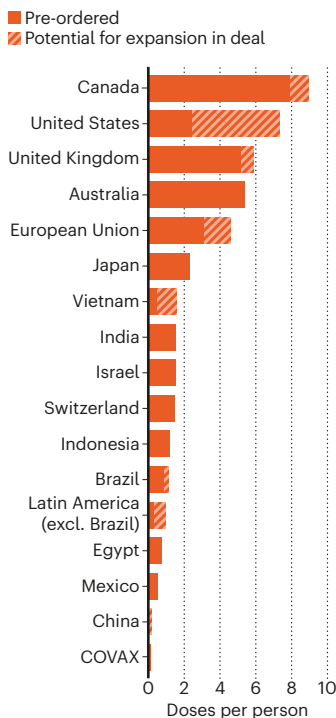
News in brief

COVID-19 VACCINES ARE NOT BEING SHARED EQUALLY

Vaccine developers who have already reported promising phase III trial results against COVID-19 estimate that, between them, they can make sufficient doses for more than one-third of the world's population by the end of 2021. But many people in low-income countries might have to wait until 2023 or 2024 for vaccination. Five rich countries and the European Union have pre-ordered about half of expected capacity for 2021, according to data from Airfinity, a life-sciences market analytics firm in London. Canada leads on vaccine deals per capita, with nearly nine doses per person. Most low- and middle-income countries will rely on contributions from COVAX, a joint fund for equitable vaccine distribution.

BEST AND WORST SUPPLIED

Canada has pre-ordered almost 9 doses of COVID-19 vaccines per person.



MILKY WAY MAP REVEALS ONE BILLION STARS IN MOTION

A huge data update from the Gaia space observatory – which is tracking more than one billion stars in the Galaxy – offers a picture of what Earth's night sky will look like for 1.6 million years to come.

The European Space Agency probe lifted off in late 2013, and began observing stars in July 2014 from a perch 1.5 million kilometres from Earth. Gaia continuously scans the sky as it slowly spins, and it has now measured the positions of the same stars multiple times. This enables scientists to track stars' nearly imperceptible motions across the Galaxy year after year, and to triangulate their positions using a technique called parallax.

The latest update is based on around three years of data, and includes a complete census of the Sun's neighbourhood: all but the faintest stars within 100 parsecs (326 light years), totalling more than 300,000 objects. The mission has expanded its catalogue of stars by 15%, and its measurements have become more precise.

The data will underpin studies that range from the origins and evolution of the Galaxy to locating its dark matter.



Arecibo telescope collapses in gut-wrenching display

The iconic radio telescope at the Arecibo Observatory in Puerto Rico has collapsed, leaving astronomers and the Puerto Rican scientific community to mourn its demise.

Engineers had warned that the 900-tonne platform suspended above the telescope's 305-metre-wide dish could fall at any moment, given that one of the main cables supporting it had snapped in early November. Last month, the US National Science Foundation, which owns the observatory, announced that it would shut down the telescope permanently, citing safety concerns over its instability, and damage too extensive to repair.

The platform plummeted into the dish after some cables failed just before 8 a.m. local time on 1 December. No one was injured.

Once the world's largest single-dish radio telescope, the Arecibo facility has been the site of many key astronomical discoveries over the years, including observations of the spinning stars known as pulsars that led to the 1993 Nobel Prize in Physics.

"Our hearts are heavy about this," said Thomas Zurbuchen, NASA's associate administrator for science, at a 1 December NASA advisory meeting.

It is unclear whether the dish will be demolished, rebuilt or left in ruins.