

# SCIENCE THIS WEEK

Relevant for: Science & Technology | Topic: Space Technology & related matters

To enjoy additional benefits

CONNECT WITH US

February 05, 2023 11:35 am | Updated 12:38 pm IST

COMMENTS

SHARE

READ LATER

A view of a green comet named Comet C/2022 E3 (ZTF), over Kryoneri, Greece, February 1, 2023. | Photo Credit: Reuters

With the rare green comet making its appearance in the night sky and 12 new moons of Jupiter being discovered, this week had a lot of excitement stored. Find the week's latest discoveries and inventions here.

A once-in-a-lifetime event took place this week with a rare comet making its closest approach to Earth for the first time in 50,000 years. Named C/2022 E3 (ZTF), the comet originating from the distant edges of the Solar System passed by Earth on February 1 and 2. The comet came as close as 45 million kilometers (28 million miles) of Earth, according to reports. The last time comet C/2022 E3 (ZTF) was this close was during the Stone Age 50,000 years ago when humans and Neanderthals still coexisted.

Astronomers have [discovered](#) 12 new moons around Jupiter, putting the total count at a record-breaking 92. That's more than any other planet in our solar system. Saturn, the one-time leader, comes in a close second with 83 confirmed moons. They were discovered using telescopes in Hawaii and Chile in 2021 and 2022, and their orbits were confirmed with follow-up observations. These newest moons range in size from 0.6 miles to 2 miles (1 kilometer to 3 kilometers).

Scientists have captured [glimpses](#) of the formation of an early galaxy with the help of the Webb Telescope and computer simulations. A predecessor of what could have developed into a Milky Way-like galaxy today, the small cluster of galaxies called CGG-z5 was seen by the telescope when the universe was only 1.1 billion years old. The study used computer simulations to help predict what sort of galaxy the small cluster would evolve into.

Using a device that might be described as a super-duper cocktail shaker, scientists have fashioned a previously unknown form of [ice](#) - one that might exist on our solar system's icy moons - in research that sheds light on water's behaviour under extreme conditions.

Virtually all ice on Earth exists in its familiar crystalline form - think of the ice cubes in your lemonade. But amorphous ice is by far the most common form of water in space. The researchers hypothesise that the type of forces they brought to bear on ordinary ice in the laboratory might exist on ice moons like Jupiter's Europa or Saturn's Enceladus.

Scientists have used a [new device](#) to identify a key membrane protein in urine that indicates

whether the patient has a brain tumour. The protein used to detect brain cancer could avoid the need for invasive tests, and increase the likelihood of tumours being detected early enough for surgery.

Young adults who feel down or depressed are more likely to develop cardiovascular disease (CVD) and have poor heart health, according to [a new study](#). Risk factors, according to the study, included high blood pressure, high cholesterol, being overweight/obese, smoking, diabetes, and poor physical activity and diet. Those who self-reported several days of feeling down had a stronger link to cardiovascular disease and poor heart health, the study noted.

Using a different approach, scientists have [said](#) that the planet could cross the threshold of rise in 1.5 degree Celsius since pre-industrial levels much sooner than previously predicted. Scientists used AI models and estimated that the planet could reach the temperature threshold in a decade and cross the 2 degree Celsius threshold by mid-century even with global efforts to stall the rise in temperature.

COMMENTS

SHARE

[science \(general\)](#) / [science \(general\)](#) / [astronomy](#) / [research](#) / [medical research](#) / [climate change](#)

BACK TO TOP

Comments have to be in English, and in full sentences. They cannot be abusive or personal. Please abide by our [community guidelines](#) for posting your comments.

We have migrated to a new commenting platform. If you are already a registered user of The Hindu and logged in, you may continue to engage with our articles. If you do not have an account please register and login to post comments. Users can access their older comments by logging into their accounts on Vuukle.

**END**

Downloaded from [crackIAS.com](#)

© **Zuccess App** by [crackIAS.com](#)