# **Weekly Update**

#### 1. 3D map of over 1 million black holes traces where the universe's dark matter lies

Quasars are the most powerful objects in existence. As small as a grain of sand compared to the Amazon River, they dwell in the hubs of some galaxies, shining with the power of a trillion stars, spewing out vast jets of matter, completely reshaping the universe around them. They are so powerful that they can destroy a galaxy.

Source: Space

https://www.space.com/quasar-3d-map-dark-matter-distribution

#### 2. 'New Star' as bright as the North Star will ignite in the sky this year. Here's how to see it.

This could be a once in a lifetime viewing opportunity as nova explosions occur approximately every 80 years. Its brightness will be similar to that of the North Star Polaris. It should be visible to the unaided eye for several days, and with a telescope for more than a week, before it dims again.

#### Source: LiveScience

https://www.livescience.com/space/cosmology/new-star-as-bright-as-the-north-star-will-ignit e-in-the-sky-this-year-after-rare-fusion-explosion-heres-how-to-see-it

# 3. Europa clipper mission set to launch in October; 'message in bottle' in 103 languages

NASA's Europa Clipper will explore Jupiter's icy moons to see if there are conditions that could support life. Europa Clipper is a spacecraft being sent to the Jupiter system. It will orbit Jupiter, but fly by the moon, Europa.

#### Source: The Times of India

https://timesofindia.indiatimes.com/home/science/europa-clipper-nasa-mission-set-to-launch-in-october-message-in-bottle-in-103-languages/articleshow/108533010.cms

#### 4. Neuralink Chip In Brain Helps Paraplegic Person Play Chess

Quadriplegic Noland Arbaugh, 29, who has a Neuralink brain-chip implanted in his brain, showed during a livestream how he is able to control his laptop cursor with his mind to play chess. The implant was approved in January after the Elon Musk-founded startup received federal approval to test the device in humans.

## Source: Chess.Com

https://www.chess.com/news/view/paraplegic-plays-chess-helped-by-neuralink-chip-in-brain #:~:text=Sitting%20behind%20a%20laptop%20wirelessly,also%20able%20to%20control%20 music.

## 5. Webb telescope finds frozen alcohol, acetic acid swirling around baby stars

In an unprecedented discovery, scientists have used the MIRI instrument aboard the James Webb Space Telescope to identify clusters of matter around the protostars IRAS 2A and IRAS 23385, suggesting the presence of frozen ethyl alcohol and possibly acetic acid.

## Source: The Indian Express

https://indianexpress.com/article/technology/science/webb-telescope-alcohol-acetic-acid-921 5740/

#### 6. The rapid spread of a serious bacterial infection is causing concern in Japan

A bacterial infection is spreading rapidly in Japan, and experts can't understand the cause. Streptococcus A is known to cause strep throat in children, but more serious strains of the bacteria can lead to complications such as streptococcal toxic shock syndrome (STSS). Some people have the bacteria in their bodies but don't have any symptoms, but they can still pass it on to others.

## Source: Le Monde

https://www.lemonde.fr/en/environment/article/2024/03/21/the-rapid-spread-of-a-serious-b acterial-infection-is-causing-concern-in-japan\_6640086\_114.html

#### 7. ISRO achieves yet another success in the RLV Landing Experiment

Indian Space Research Organization (ISRO) successfully completed the landing mission of its Reusable Launch Vehicle (RLV) named 'Pushpak' from the Aeronautical Test Range (ATR) at Challakere, Karnataka. The launch vehicle was carried by an Indian Air Force helicopter to an altitude of about 4.5 km and released after achieving predetermined pillbox parameters.

Source: ISRO

https://www.isro.gov.in/RLV\_Landing\_Experiment.html

#### 8. Oxford researchers uncover remarkable archive of ancient human brains

A new study has cataloged human brains found in archaeological records around the world and revealed that the organ is much more resistant to disintegration than we thought, with other body tissues being completely destroyed. also remains alive. According to Science Alert, a group of scientists led by scientists from the University of Oxford have identified more than 4,400 preserved human brains, some of which are as old as 12,000 years.

#### **Source:** University of Oxford

https://www.ox.ac.uk/news/2024-03-20-oxford-researchers-uncover-remarkable-archive-anci ent-human-brains

# 9. Does the Wim Hof Method really work?

The researchers emphasize that more controlled studies are needed to know whether Wim Hof's method has a greater effect than placebo. According to him, it's great that people find that soaking in ice water improves their health, but scientists want to make sure that these benefits do not interfere with people's health.

## Source: BioTechniques

https://www.biotechniques.com/news/does-the-wim-hof-method-really-work/

# 10. Einasto: Largest discovered galaxy supercluster can accommodate 26 quadrillion Suns

This particular supercluster is named in honor of Estonian astrophysicist Jan Inasto, who was one of the discoverers of supercluster complexes and the Great Walls of the Galactic Universe. This supercluster is so huge that it takes 360 million years for a light signal to reach from one side of it to the other.

Source: The News

https://www.thenews.com.pk/latest/1170780-einasto-largest-discovered-galaxy-supercluster-can-accommodate-26-quadrillion-suns