"Observations always involve theory." Edwin Powell Hubble

SPACE CAMP TURKEY
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Global Friendship Through Space Education

Astro

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CONTENTS

NASA's Next Big Space Telescope: LUVOIR

NASA faces a difficult choice: What does the agency want to select as its next big space telescope, the instrument that will shape scientists' research in the 2040s?

The answer is still years in the future, but NASA has funded detailed analyses of four potential projects so the agency can better understand the possible risks and opportunities of each proposal. One of those mission concepts is called the Large UV/Optical/IR Surveyor (LUVOIR).

Space.com

Autonomous Orbital Greenhouse Could Provide Fresh Vegetables

If humanity is going to become a spare-faring and interplanetary species, one of the most important things will be the ability of astronauts to see to their needs independently. Relying on regular shipments of supplies from Earth is not only inelegant; it's also impractical and very expensive. For this reason, scientists are working to create technologies that would allow astronauts to provide for their own food, water, and breathable air.

The smart greenhouse project will incorporate technologies developed at TPU, which includes smart lighting that will accelerate plant growth, specialized hydroponics, automated irrigation, and harvesting solutions. At present, TPU is constructing a new testing ground so they can expand production on the smart greenhouse.

Technology.org

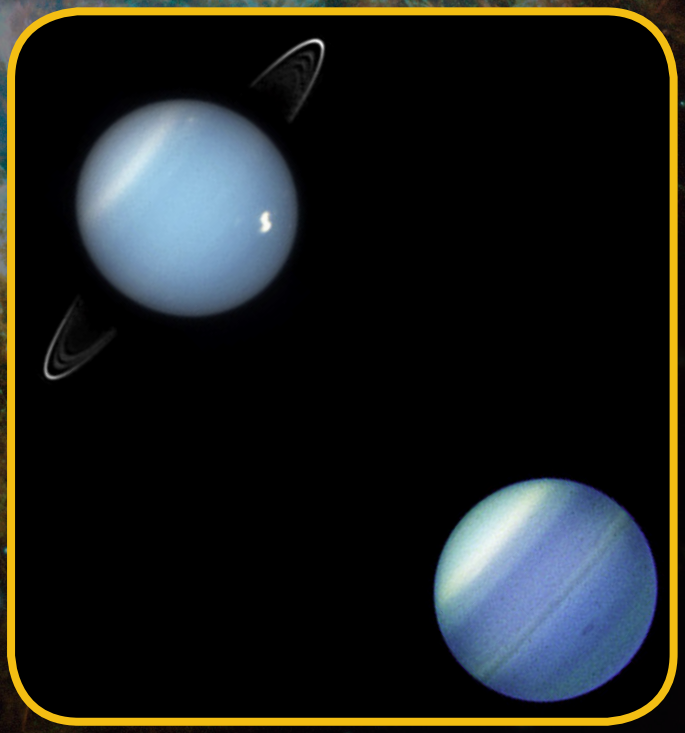
Trembling Mars Gives up More Seismic Secrets

Mars is a constantly tremoring "living" body, researchers said Monday as they unveiled measurements of seismic activity on the red planet showing similar tremble rates to Earth or the Moon. For 15 months NASA's InSight robot craft scoured the surface of Earth's neighbour, and measured hundreds of so-called "Marsquakes". These included several tremors that contained the same frequency patterns as tremors caused by the movement of Earth's own tectonic plates.

MarsDaily.com

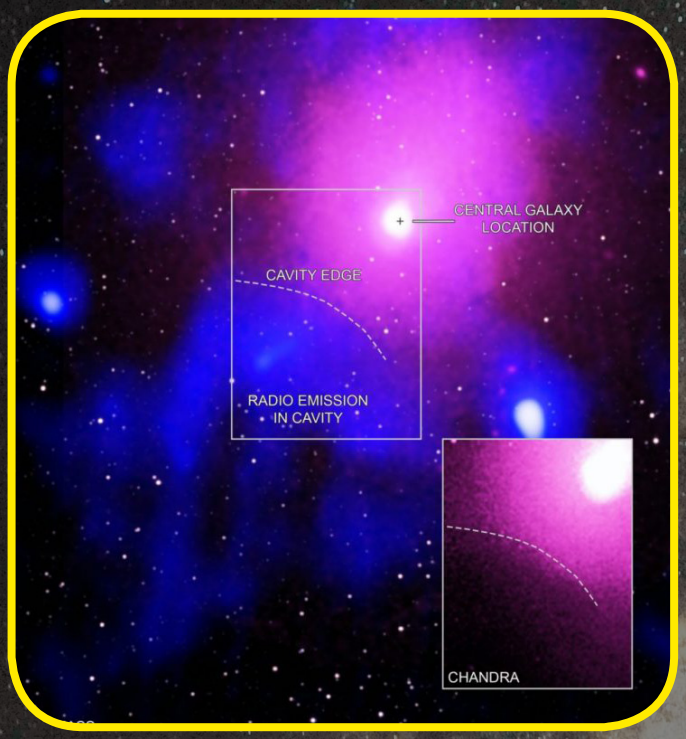
Examining Ice Giants with NASA's Webb Telescope

Far-flung Uranus and Neptune—the ice giants of our solar system—are as mysterious as they are distant. Soon after its launch in 2021, NASA's James Webb Space Telescope will change that by unlocking secrets of the atmospheres of both planets. The cold and remote giant planets Uranus and Neptune are nicknamed the "ice giants" because their interiors are compositionally different from Jupiter and Saturn, which are richer in hydrogen and helium, and are known as the "gas giants."



Phys.org

Biggest Explosion in History of Universe



Scientists studying a distant galaxy cluster say they've got a new record-holder for the biggest explosion seen in the universe since the Big Bang in which our universe began. The blast is thought to have come from a supermassive black hole at the center of a galaxy – at the heart of a galaxy cluster – hundreds of millions of light-years away. Researchers estimate that the blast released five times more energy than the previous record holder and hundreds of thousands of times more energy than a typical galaxy cluster.

EarthSky.org

First Food in Space: Toothpaste Tubes of Applesauce and Beef

The dawn of the Space Age left an entire generation fantasizing about becoming astronauts, floating free above Earth's surface with a window directly to the stars. Humanity might have reconsidered those daydreams if they knew what astronauts had to eat.

First space food

In 1961, Soviet cosmonaut Yuri Gagarin became the first human to orbit Earth. He also was the first person to eat in space. Gagarin's meal featured two portions of pureed meat, stored neatly in toothpaste-tube-like containers.

The following year, astronaut John Glenn became the first American to orbit Earth. Glenn's meal selection wasn't any better than Gagarin's, but at least NASA packed him a straw. Glenn was served up a tube of applesauce, plus some sugar tablets that he dissolved in water.

Astronomy.com

Global Friendship Through Space Education

Schools In Action!

Dear followers,
The photographs, which you can see below, are the ones that were taken during the projects and presentations of the students that participated in PSSP (Partner School Science Program) and FEP (Future Explorers Program). We are happy and proud to share the projects that were created with brilliant ideas.

1- Yane Sandanski School (PSSP), BULGARIA, 2- Halkali Bahcesehir Schools (FEP), Istanbul/TURKEY,
3- Hristo Botev Secondary School (FEP), BULGARIA, 4, 5- MEF Schools Ulus Campus (PSSP), Istanbul/TURKEY

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Astronomy Picture of the Day

Sharpless-308: The Dolphin Nebula

Image Credit & Copyright: *Chilesope 2, Pleaides Astrophotography Team (Peking U.)*

Blown by fast winds from a hot, massive star, this cosmic bubble is much larger than the dolphin it appears to be. Cataloged as Sharpless 2-308 it lies some 5,200 light-years away toward the constellation of the Big Dog (Canis Major) and covers slightly more of the sky than a Full Moon. That corresponds to a diameter of 60 light-years at its estimated distance. The massive star that created the bubble, a Wolf-Rayet star, is the bright one near the center of the nebula. Wolf-Rayet stars have over 20 times the mass of the Sun and are thought to be in a brief, pre-supernova phase of massive star evolution. Fast winds from this Wolf-Rayet star create the bubble-shaped nebula as they sweep up slower moving material from an earlier phase of evolution. The windblown nebula has an age of about 70,000 years. Relatively faint emission captured in the featured expansive image is dominated by the glow of ionized oxygen atoms mapped to a blue hue.

apod.nasa.gov

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