



An ESBAŞ Enterprise



Global Friendship Through Space Education

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### A Solution to Space Junk: Satellites Made of Mushrooms?

According to the latest numbers from the ESA’s Space Debris Office (SDO), there are roughly 6,900 artificial satellites in orbit. This creates all kinds of worries for collision risks and space debris, not to mention environmental concerns. Enter Max Justice, a cybersecurity expert, former Marine, and “Cyber Farmer” who spent many years working in the space industry. Currently, he is working towards a new type of satellite that is made out of mycelium fibers. This tough, heat-resistant, and environmentally friendly material could trigger a revolution in the booming satellite industry.

Phys.org

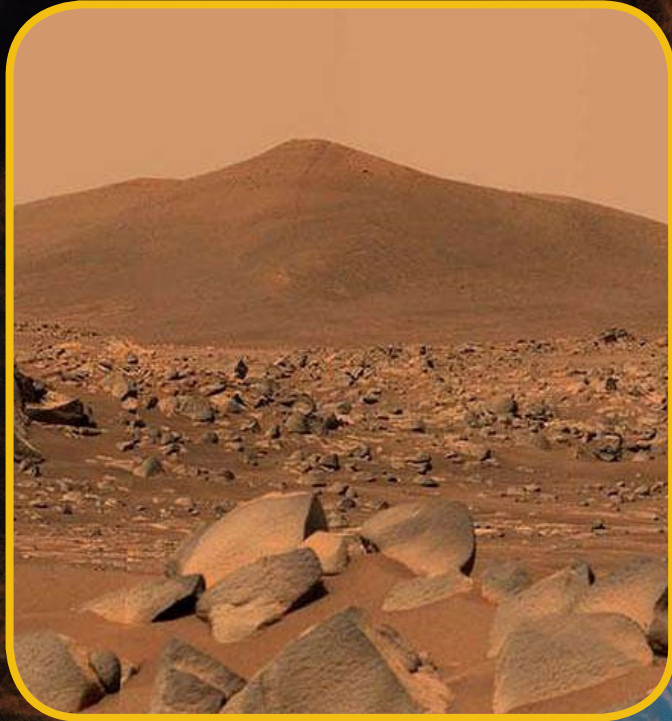


## China Unveils 1<sup>st</sup> Mars Photos From Zhurong Rover

China has released the first photographs taken by its Zhurong rover, which touched down on Mars late on Friday (May 14) as part of the country’s Tianwen-1 mission. China’s successful Mars landing made the country only the second nation to successfully soft-land on Mars, joining the United States. The Soviet Union and the European Space Agency have also sent missions to the Red Planet’s surface, but those landings have not been successful.

Space.com

## Perseverance's Robotic Arm Starts Conducting Science



NASA's Perseverance rover has been busy serving as a communications base station for the Ingenuity Mars Helicopter and documenting the rotorcraft's historic flights. But the rover has also been busy focusing its science instruments on rocks that lay on the floor of Jezero Crater. Thanks to the robotic arm the samples will be stored in special tubes and deposited in collections on the planet's surface for eventual return to Earth.

*MarsDaily.com*

## A New Space Instrument Captures Its First Solar Eruption

On February 12, 2021, a little more than a year from its launch, the European Space Agency and NASA's Solar Orbiter caught sight of this coronal mass ejection, or CME. This view is from the mission's SoloHI instrument (short for Solar Orbiter Heliospheric Imager) which watches the solar wind, dust, and cosmic rays that fill the space between the Sun and the planets. For SoloHI, catching this CME was a happy accident. At the time the eruption reached the spacecraft, Solar Orbiter had just passed behind the Sun from Earth's perspective and was coming back around the other side.



*Technology.org*

## At Long Last, a Radio Telescope on the Moon's Far Side



The Lunar Crater Radio Telescope is now moving into Phase 2 of development. It'll be built by robots, into a natural bowl-shaped crater on the moon's far side. The Lunar Crater Radio Telescope has a proposed 1-km diameter (.6 mile), much larger in the moon's low gravity than any earthly radio telescope. If completed, this telescope will be the largest filled-aperture radio telescope in our solar system.

*EarthSky.org*

## How TESS Hunts More Than Just Exoplanets

NASA's premier planet-seeking telescope has also contributed to the study of comets, asteroids, black holes, supernovae, and much more. Among those unexpected finds is a recent gamma-ray burst (GRB), which TESS spotted in October 2020. GRBs are short-lived but powerful explosions that astronomers believe occur either when a massive star explosively dies or when two neutron stars merge. In both cases, the result is a black hole. These events release as much energy in a few seconds or minutes as the Sun puts out over its entire lifetime.



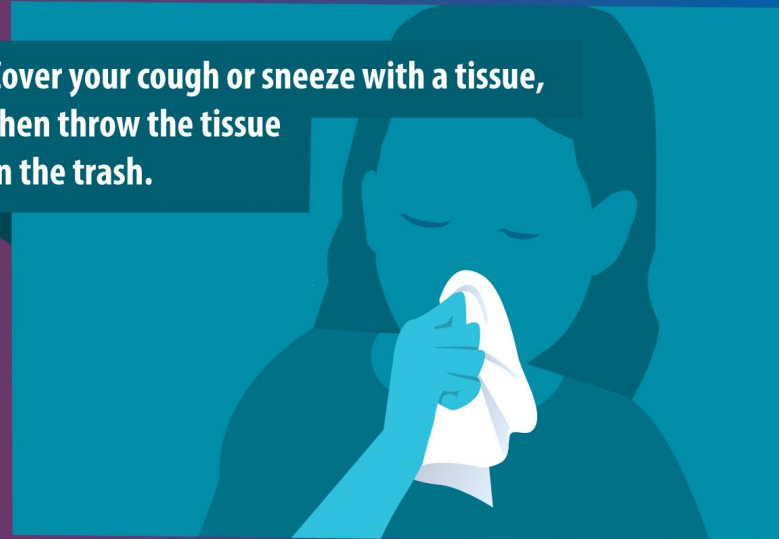
*Astronomy.com*

## How to Protect Ourselves?

Avoid close contact with people who are sick.



Cover your cough or sneeze with a tissue, then throw the tissue in the trash.



Avoid touching your eyes, nose, and mouth.



Clean and disinfect frequently touched objects and surfaces.



Stay home when you are sick, except to get medical care.



Wash your hands often with soap and water for at least 20 seconds.





## Astronomy Picture of the Day

**M13: The Great Globular Cluster in Hercules**

**Image Credit & Copyright:** *Martin Dufour*

In 1716, English astronomer Edmond Halley noted, "This is but a little Patch, but it shews itself to the naked Eye, when the Sky is serene and the Moon absent." Of course, M13 is now less modestly recognized as the Great Globular Cluster in Hercules, one of the brightest globular star clusters in the northern sky. Sharp telescopic views like this one reveal the spectacular cluster's hundreds of thousands of stars. At a distance of 25,000 light-years, the cluster stars crowd into a region 150 light-years in diameter. Approaching the cluster core upwards of 100 stars could be contained in a cube just 3 light-years on a side. For comparison, the closest star to the Sun is over 4 light-years away. The remarkable range of brightness recorded in this image follows stars into the dense cluster core. Distant background galaxies in the medium-wide field of view include NGC 6207 at the lower right.

[apod.nasa.gov](http://apod.nasa.gov)



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