Volume 13, Issue 17





Global Friendship Through Space Education

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### How Many Habitable Planets Are Out There?

Thanks to new research using data from the Kepler space telescope, it's estimated that there could be as many as 300 million potentially habitable planets in our galaxy. Some could even be pretty close, with several likely within 30 lightyears of our Sun. The findings will be published in The Astronomical Journal, and research was a collaboration of scientists from NASA, the SETI Institute, and other organizations worldwide. Phys.org

## NASA's OSIRIS-REx Successfully Touches Asteroid Bennu

NASA's OSIRIS-REx spacecraft unfurled its robotic arm and in a first for the agency, briefly touched an asteroid to collect dust and pebbles from the surface for delivery to Earth in 2023. This well-preserved, ancient asteroid, known as Bennu, is currently more than 321 million kilometers from Earth. Bennu offers scientists a window into the early solar system as it was first taking shape billions of years ago and flinging ingredients that could have helped seed life on Earth.

## Newsletter

## **SOFIA Finds Water on the Moon's Sunlit Surface**



For the first time ever, scientists have identified water on the moon's sunlit surface. They also found that water is more common on the moon than previously thought, with pockets of ice hiding in some of its darker, shadow-covered regions. A team of project scientists and leaders announced the news and discussed the exciting revelations during a conference held by NASA. Speakers also referenced the agency's ambitious Artemis program, which aims to land astronauts at the moon's south pole in the year 2024.

## **NASA's Perseverance Rover Is Midway to Mars**

NASA's Mars 2020 Perseverance rover mission has logged a lot of flight miles since being lofted skyward on July 30 235.4 million kilometers to be exact. Turns out that is exactly the same distance it has to go before the spacecraft hits the Red Planet's atmosphere like a 19,000 kph freight train on Feb. 18, 2021. The Mars 2020 mission is part of a larger program that includes missions to the Moon as a way to prepare for human exploration of the Red Planet.

<image>

## What is the Weather Like on Mars?



The red planet has some characteristics of climate similar to those on Earth, but for the large part of it, Mars is a barren, radioactive desert. The average climate is rather cold, and the atmospheric pressure is close to vacuum. The weather on Mars depends heavily on the very thin atmosphere, yet some familiar atmospheric phenomena can be observed: clouds, dust storms, or even dust tornadoes. Hopefully, one day humans will be able to experience a blue Martian sunrise with their own eyes, as the first astronauts arrive on the red planet.

**Newsletter** 

Technology.org

## ESA Lays Out Roadmap to Ariane 6 and Vega-C Flights

Vega-C and Ariane 6 are being developed by ESA to assure Europe's independent access to space. The maiden flight for Vega-C is planned to take place in June 2021, that for Ariane 6 for the second quarter of 2022. Solid progress is being made on both Vega-C and Ariane 6 development programmes. Since March, some technical events and the COVID-19 pandemic have both impacted the progress of activities. Uncertainty from COVID-19 still persists globally to date.



Space.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.

Clean and disinfect frequently touched objects and surfaces.

Avoid touching your eyes, nose, and mouth.

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

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





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## #IZMIR

We wish a speedy recovery to those who were injured, and our thoughts and prayers to all those affected by the earthquake in #Izmir the beautiful city of Turkey.



## **Newsletter**

## **Astronomy Picture of the Day**

#### NGC 6357: The Lobster Nebula Image Credit & Copyright: Steven Mohr

Why is the Lobster Nebula forming some of the most massive stars known? No one is yet sure. Cataloged as NGC 6357, the Lobster Nebula houses the open star cluster Pismis 24 near its center -- a home to unusually bright and massive stars. The overall blue glow near the inner star forming region results from the emission of ionized hydrogen gas. The surrounding nebula, featured here, holds a complex tapestry of gas, dark dust, stars still forming, and newly born stars. The intricate patterns are caused by complex interactions between interstellar winds, radiation pressures, magnetic fields, and gravity. NGC 6357 spans about 400 light years and lies about 8,000 light years away toward the constellation of the Scorpion.



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