"We make our world significant by the courage of our questions and the depth of our answers." Carl Sagan





Global Friendship Through Space

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### **China Releases New Pictures From the** Surface of the Moon

Ever since it made its historic landing on Jan. 3rd, 2019, the Chang'e-4 mission and its Yutu 2 rover have been busy exploring the lunar surface. Just recently, the mission passed its first year of operations and earned the distinction of being the first rover to travel a record 357.695 meters (1,173.5 ft) on the far side of the Moon. And in between all that, the mission has also provided some truly fascinating images of the lunar surface.

#### Volume 13, Issue 2

January 28, 2020

## First NASA Artemis Rocket Core **Stage Ready for Test**

The SLS core stage, the largest rocket stage ever built by NASA, stands 212 feet tall and measures 27.6 feet in diameter. It is equipped with state-of-the-art avionics, miles of cables, propulsion systems and propellant tanks that hold a total of 733,000 gallons of liquid oxygen and liquid hydrogen to fuel the four RS-25 engines during launch. NASA.aov

## **Newsletter**

## **China to Launch Mars Probe in July**



China announced that it will launch its first Mars mission probe in July this year, China Youth Daily reported Thursday, adding that this is the first time the country disclosed the launch month of its Mars exploration program. The Mars probe will be sent by the Long March-5 Y4 carrier rocket, said the newspaper, citing sources from the China Aerospace Science and Technology Corporation (CASC).

MarsDaily.com

### NESSI Emerges as New Tool for Exoplanet Atmospheres

Since February 2018, scientists have been testing an instrument at the Hale Telescope called the New Mexico Exoplanet Spectroscopic Survey Instrument, or NESSI. A collaboration between NASA's Jet Propulsion Laboratory in Pasadena, California, and the New Mexico Institute of Mining and Technology, NESSI was built to examine the atmospheres of planets that orbit stars beyond our Sun, or exoplanets, providing new insights into what these worlds are like.



Technology.org

## **Newsletter**

## Celebrating the Legacy of the Spitzer Space Telescope



On the Tuesday, January 28, Spitzer will carry out its final day working on science missions, which it will spend gathering data on the cosmos. On Thursday, the space telescope will be placed into a "hibernation mode," leaving it to drift through space forever. Unlike the Hubble Space Telescope, Spitzer will not be deorbited and burn up in Earth's atmosphere. This is because Spitzer does not orbit Earth; it's in an Earth-trailing orbit around the Sun.

Astronomy.com

### How Many Supermoons in 2020?

EarthSky.org

A supermoon is a new or full moon closely coinciding with perigee, the moon's closest point to Earth in its monthly orbit. Enjoy a "season" of 3 full moon supermoons on March 9, April 8 and May 7, 2020. Then we'll have a "season" of 3 new moon supermoons on September 17, October 16 and November 15, 2020. By the way, the most distant and smallest full moon of the year will fall on October 31, 2020. Sometimes called a micromoon.





# Schools In Action!

Dear followers,

Contraction Contraction

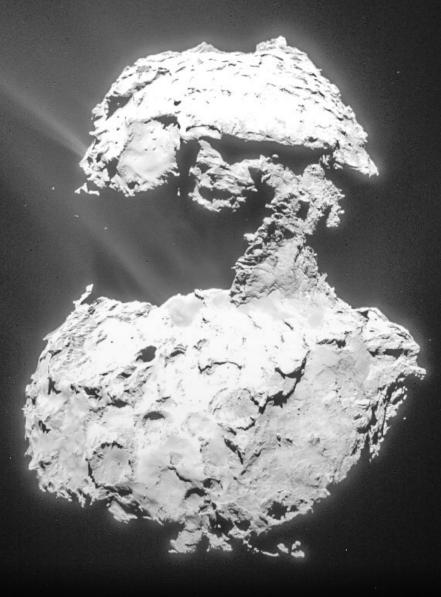
TP:

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, 2- Hristo Botev Secondary School (FEP), BULGARIA, 3- TAKEV Schools (PSSP), Izmir/TURKEY 4, 5- The Little Prince School (FEP), BULGARIA







### **Astronomy Picture of the Day**

#### Comet CG Evaporates Image Credit & Copyright: ESA, Rosetta, NAVCAM

Where do comet tails come from? There are no obvious places on the nuclei of comets from which the jets that create comet tails emanate. One of the best images of emerging jets is shown in the featured picture, taken in 2015 by ESA's robotic Rosetta spacecraft that orbited Comet 67P/Churyumov-Gerasimenko (Comet CG) from 2014 to 2016. The picture shows plumes of gas and dust escaping numerous places from Comet CG's nucleus as it neared the Sun and heated up. The comet has two prominent lobes, the larger one spanning about 4 kilometers, and a smaller 2.5-kilometer lobe connected by a narrow neck. Analyses indicate that evaporation must be taking place well inside the comet's surface to create the jets of dust and ice that we see emitted through the surface. Comet CG (also known as Comet 67P) loses in jets about a meter of radius during each of its 6.44-year orbits around the Sun, a rate at which will completely destroy the comet in only thousands of years. In 2016, Rosetta's mission ended with a controlled impact onto Comet CG's surface.



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