

"A human being is a part of the whole called by us universe, a part limited in time and space." Albert Einstein



Astro

Volume 13, Issue 3

February 21, 2020

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Mars 2020 Rover Goes Coast-to-Coast to Prep for Launch

NASA's next Mars rover has arrived in Florida to begin final preparations for its launch to the Red Planet this July. Two Air Force C-17 Globemaster cargo planes carrying the Mars 2020 rover as well as the cruise stage, descent stage and Mars Helicopter touched down at NASA's Kennedy Space Center at about 3 p.m. EST (12 p.m. PST) today, completing a 2,300-mile (3,700-kilometer) trip that began yesterday at NASA's Jet Propulsion Laboratory in Pasadena, California.

MarsDaily.com

How Do Astronomers Find Exoplanets?

Exoplanets, by definition, exist outside our solar system, orbiting other stars. That means they're pretty far away. Telescopes, even top-notch ones like Hubble, can't image anything as small as a planet outside our solar system. Even Neptune, in our own solar system, is a blurry blue ball when viewed from Earth's orbit. So planets outside our solar system are practically invisible. However, planets can and do affect their stars in measurable ways, and that's how astronomers find them.

The two most widely used methods are transits – the blinking method – or Doppler shifting – the wobble method.

Astronomy.com

What's Up With That Rock?



China's Yutu-2 lunar rover has discovered what appear to be relatively young rocks during its recent exploration activities on the lunar far side. The Chang'e-4 mission's rover imaged the scattered, apparently lighter-colored rocks during lunar day 13 of the mission, in December 2019, according to the Chinese-language 'Our Space' science outreach blog. The specimens, which are quite different from those already studied by the rover, could round out the team's insights into the geologic history and evolution of the area, called Von Kármán crater.

Space.com

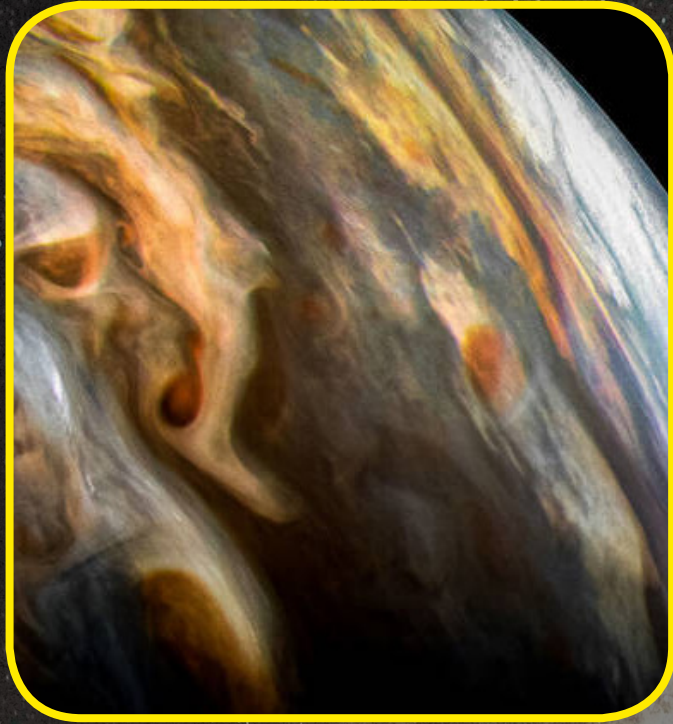
Engineers Devise a Decision Map to Deflect an Asteroid

MIT researchers have devised a framework for deciding which type of mission would be most successful in deflecting an incoming asteroid. Their decision method takes into account an asteroid's mass and momentum, its proximity to a gravitational keyhole, and the amount of warning time that scientists have of an impending collision—all of which have degrees of uncertainty, which the researchers also factor in to identify the most successful mission for a given asteroid.



Phys.org

Findings From NASA's Juno Update Jupiter Water Mystery

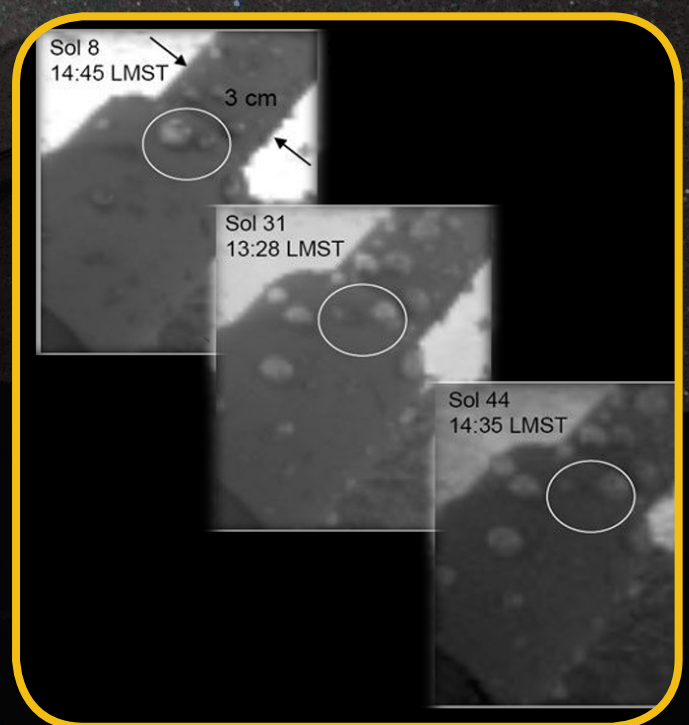


NASA's Juno mission has provided its first science results on the amount of water in Jupiter's atmosphere. The Juno results estimate that at the equator, water makes up about 0.25% of the molecules in Jupiter's atmosphere — almost three times that of the Sun. These are also the first findings on the gas giant's abundance of water since the agency's 1995 Galileo mission suggested Jupiter might be extremely dry compared to the Sun.

Technology.org

Water in the Shadows of Boulders on Mars?

Mars is a cold, very dry, desert world. Although it has ice caps of water ice (as well as carbon dioxide ice) and vast amounts of ice below its surface, no liquid water has been found on Mars' surface. But there might be some. We might just need to look behind large boulders, in springtime. A new study from the Planetary Science Institute (PSI) adds to previous evidence that small amounts of briny (salty) water might be able to form on the Martian surface under just the right conditions.



EarthSky.org



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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- Yönder College (FEP), Izmir/TURKEY, 2- Velzys Gymnasium (PSSP), LITHUANIA, 3- RoboLabas (FEP), LITHUANIA, 4- ITK KEV Campus (FEP), Marmaris/TURKEY, 5- Gymnasium No:3 Volgograd (FEP), RUSSIA



Astronomy Picture of the Day

Trifecta at Twilight

Image Credit & Copyright: Paul Schmit, Gary Schmit

On February 18, as civil twilight began in northern New Mexico skies, the International Space Station, a waning crescent Moon, and planet Mars for a moment shared this well-planned single field of view. From the photographer's location the sky had just begun to grow light, but the space station orbiting 400 kilometers above the Earth was already bathed in the morning sunlight. At 6:25am local time it took less than a second to cross in front of the lunar disk moving right to left in the composited successive frames. At the time, Mars itself had already emerged from behind the Moon following its much anticipated lunar occultation. The yellowish glow of the Red Planet is still in the frame at the upper right, beyond the Moon's dark edge.

apod.nasa.gov



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