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### Do Meteor Showers Create Meteorites?

Earth's atmosphere provides a safety buffer that protects us from (most) incoming space rocks. As Earth circles the Sun, our planet regularly passes through dust and debris left in our path by passing comets and asteroids. Each time this happens, Earth experiences a meteor shower that fills the sky with bright streaks of light. These "falling stars" are the result of cosmic clouds of detritus burning up in our atmosphere. But does any debris from a meteor shower ever make it to the ground as a meteorite? The answer is no. Meteor showers, despite their stunning light shows, don't actually produce any meteorites.

*Astronomy.com*



## The Artemis Team

NASA has selected 18 astronauts from its corps to form what it's calling the Artemis Team. Two of these astronauts are expected to become the first American man and woman to return to the moon since 1972. That crewed lunar mission might launch as early as 2024. You may see Joseph Acaba, Matthew Dominick, Anne McClain, Jessica Meir, and Jessica Watkins attend the announcement in person, representing their teammates.

*EarthSky.org*



## Total Solar Eclipse of 2020 Thrills Spectators in South America



The only total solar eclipse of 2020 dazzled spectators in South America, and some lucked out even as overcast skies threatened to put a damper on an incredible celestial event. Monday's (Dec. 14) eclipse happened during the Southern Hemisphere's summertime. Daniela Fernandez from the Astrophysics Institute at the Pontifical Catholic University of Chile said that the facility had many tools ready to go to take advantage of its near-zenith (overhead) position in the sky this year. Unfortunately it was completely overcast at the university's astronomical observatory during the eclipse.

*Space.com*

## Japan's Space Agency Finds Ample Soil, Gas From Asteroid Sample

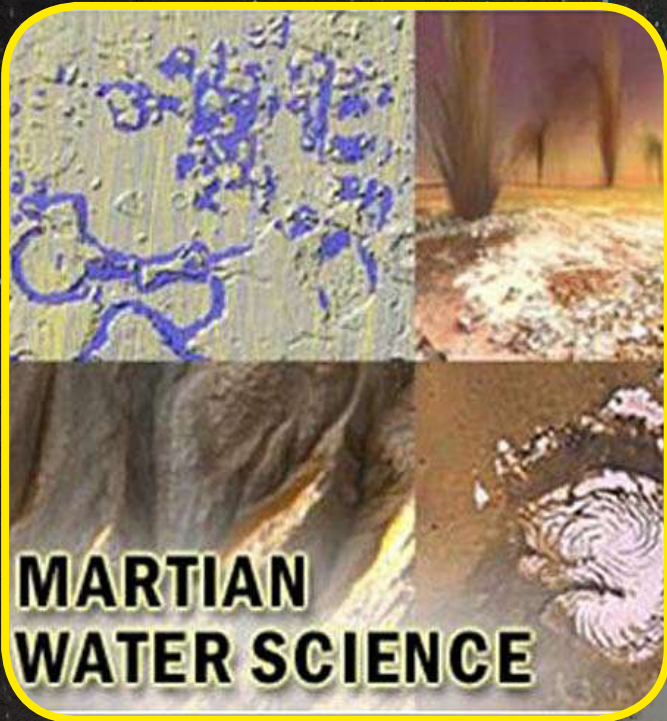
Officials from Japan's space agency said Tuesday they have found more than the anticipated amount of soil and gases inside a small capsule the country's Hayabusa2 spacecraft brought back from a distant asteroid called Ryugu this month. The capsule arrived in Japan last Tuesday for research that scientists hope will provide insight into the origins of the solar system and life on Earth.



*Phys.org*



## Water on Mars Not as Widespread as Previously Thought



Water on Mars, in the form of brines, may not be as widespread as previously thought, according to a new study by researchers at the Arkansas Center for Space and Planetary Sciences. Researchers combined data on brine evaporation rates, collected through experiments at the center's Mars simulation chamber, with a global weather circulation model of the planet to create planetwide maps of where brines are most likely to be found.

*MarsDaily.com*

## Boeing Complete Series of Starliner Parachute Tests

NASA and Boeing have completed Starliner's last parachute balloon drop test ending a reliability campaign that will help strengthen the spacecraft's landing system ahead of crewed flights to and from the International Space Station. The campaign, developed by both Boeing and NASA, used six balloon drop tests of a Starliner test article to gather supplemental performance data on the spacecraft's parachutes and landing system. Each drop test focused on a different set of adverse conditions and used pre-flown parachutes to evaluate reusability margins for future missions.

*Technology.org*



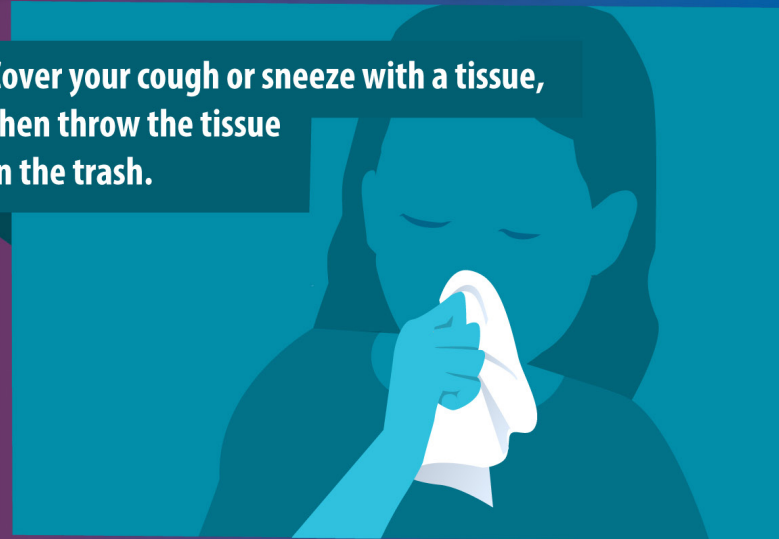


## How to Protect Ourselves?

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.







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# HAPPY New Year

Dear followers,  
With the year coming to an end and the New Year right around the corner, we as Astro Newsletter want to say thank you for following us, and we are wishing you a "spaceful" new year. Happy New Year!





Nov 1, 2020

Nov 11, 2020

Nov 21, 2020

Dec 1, 2020

Dec 11, 2020

Dec 21, 2020

Dec 31, 2020

Southwest

## Astronomy Picture of the Day

**Great Conjunction: Saturn and Jupiter Converge**

**Image Credit & Copyright:** Sebastian Voltmer

It's happening. Saturn and Jupiter are moving closer and will soon appear in almost exactly the same direction. Coincidentally, on the night of the December solstice -- the longest night of the year in the north and the longest day in the south -- the long-awaited Great Conjunction will occur. Then, about six days from now, Saturn and Jupiter will be right next to each other -- as they are every 20 years. But this juxtaposition is not just any Great Conjunction -- it will be the closest since 1623 because the two planetary giants will pass only 1/10th of a degree from each other -- well less than the apparent diameter of a full moon. In the next few days a crescent moon will also pass a few degrees away from the converging planets and give a preliminary opportunity for iconic photos. The featured illustration shows the approach of Saturn and Jupiter during November and December over the French Alps.

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



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