



An ESBAS Enterprise



Global Friendship Through Space Education



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### Hayley Arceneaux will be Youngest American and 1<sup>st</sup> Spaceflyer with a Prosthesis

This week, a crew of four spaceflyers will launch as part of the first all-civilian mission to Earth orbit. But this isn't the only major "first" for Inspiration4.

With this flight, the 29-year-old Arceneaux will set two records: she will be both the youngest American to fly to space and the first person to ever fly to space with a prosthesis.

Space.com



### In First, SpaceX to Send All-Civilian Crew Into Earth Orbit

Can four people who've never been to space before spend three days spinning around Earth after only a few months of training? That's the challenge SpaceX has set for itself when it launches its first tourism mission on Wednesday, the first time a crew of exclusively private citizens will orbit our planet.

A five-hour launch window for "Inspiration4" opens from 00:02 (GMT) Thursday (16 September).

A Falcon 9 rocket, with a Dragon capsule at its top, will blast off from the legendary launch complex 39A at NASA's Kennedy Center in Florida. The spaceship's trajectory will take it to an altitude of 575 kilometers, deeper into space than the International Space Station (ISS).

Phys.org

## NASA's Perseverance Rover Collects Puzzle Pieces Of Mars' History

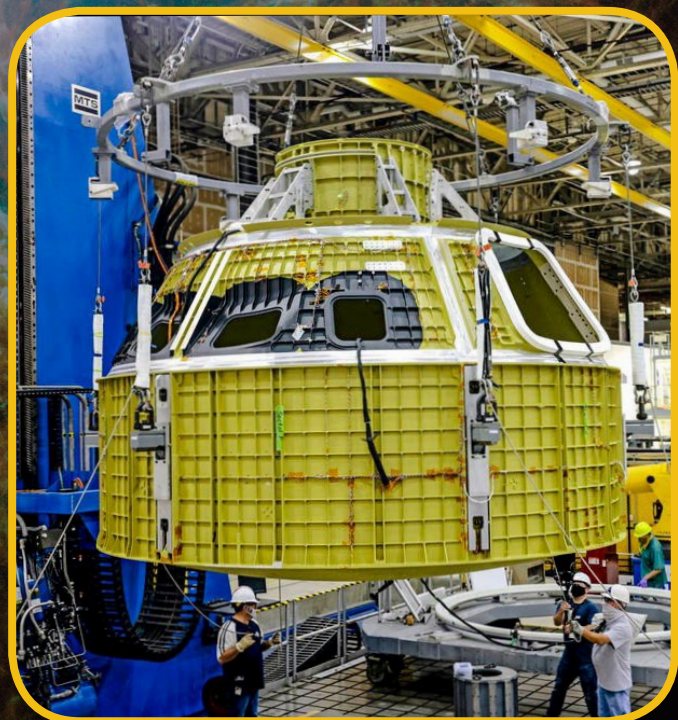


NASA's Perseverance Mars rover successfully collected its first pair of rock samples, and scientists already are gaining new insights into the region. Analysis of the rocks from which the Montdenier and Montagnac samples were taken and from the rover's previous sampling attempt may help the science team piece together the timeline of the area's past, which was marked by volcanic activity and periods of persistent water.

*MarsDaily.com*

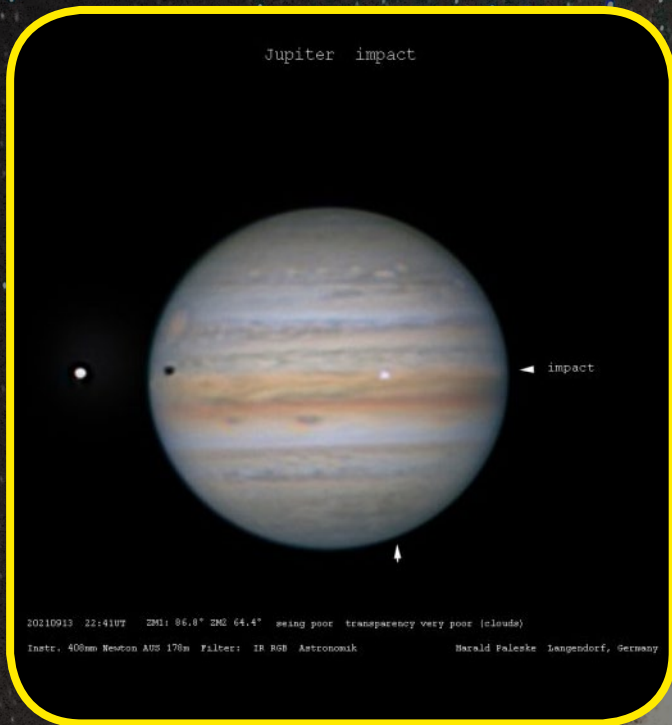
## Next Generation of Orion Spacecraft in Production for Future Artemis Missions

Over the next decade, NASA's Orion spacecraft will carry astronauts during Artemis missions to the Moon to help prepare for human missions to Mars. Work on the spacecraft for Artemis I is nearly complete, Artemis II is well underway, and NASA is making progress on vehicles for the missions beyond. The agency recently completed welding on the Artemis III Orion pressure vessel, the underlying frame of the air-tight capsule for astronauts called the crew module. This structure is the first major piece of hardware in Orion's production phase with lead contractor Lockheed Martin.



*Technology.org*

## Impact On Jupiter Surprises Skywatchers

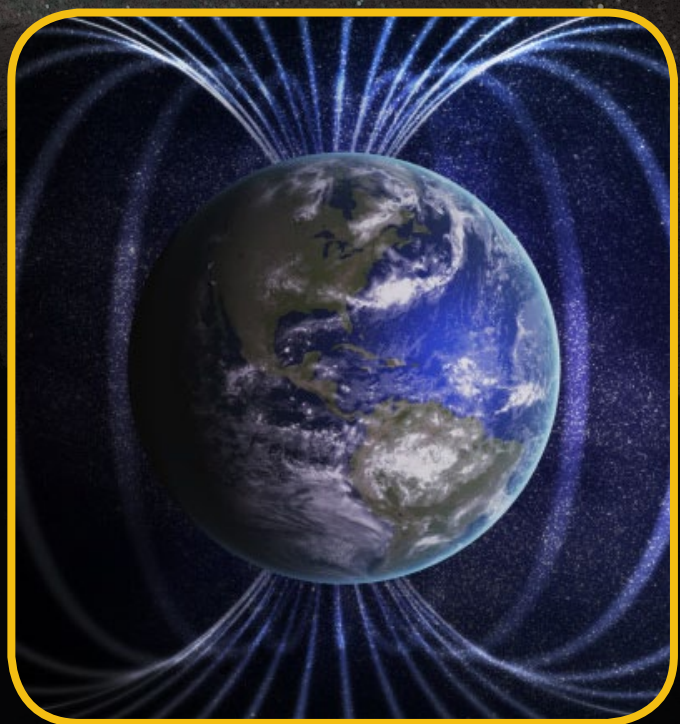


Observers around the globe were surprised on September 13, 2021, when they witnessed an apparent impact on the giant planet Jupiter. A bright flash of light distracted them from their observing target: an ongoing transit of the shadow of the Jovian moon Io across the face of Jupiter. A couple of lucky astrophotographers managed to snap images of the flash.

EarthSky.org

## When North Goes South: Is Earth's Magnetic Field Flipping?

Something odd is happening to Earth's magnetic field. Over the last 200 years, it's been slowly weakening and shifting its magnetic north pole (where a compass points, not to be confused with the geographic north pole) from the Canadian Arctic toward Siberia. In recent decades, however, that slow shift south has quickened — reaching speeds upwards of 48 kilometers per year. Could we be on the brink of a geomagnetic reversal, in which the magnetic north and south poles swap places?



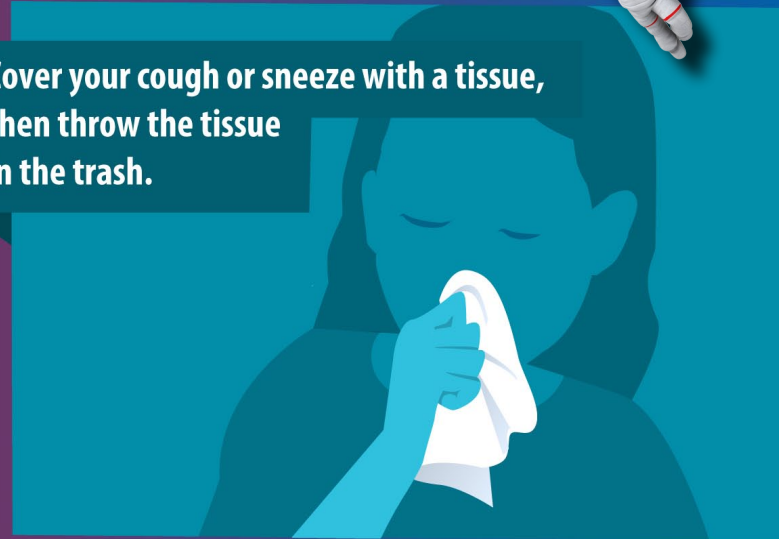
## How to Protect Ourselves?



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

### *Rosetta's Comet in View*

**Image Credit & Copyright:** *Rolando Ligustri (CARA Project, CAST)*

Faint comet Churyumov-Gerasimenko (67P) sweeps past background stars in the constellation Taurus and even fainter distant galaxies in this telescopic frame from September 7. About 5 years ago, this comet's 4 kilometer spanning, double-lobed nucleus became the final resting place of robots from planet Earth, following the completion of the historic Rosetta mission to the comet. After wandering out beyond the orbit of Jupiter, Churyumov-Gerasimenko is now returning along its 6.4 year periodic orbit toward its next perihelion or closest approach to the Sun, on November 2. On November 12, the comet's perigee, its closest approach to Earth, will bring it within about 0.42 astronomical units. Telescopes should still be required to view it even at its brightest, predicted to be in late November and December. On September 7 Rosetta's comet was about 0.65 astronomical units away or about 5.4 light-minutes from our fair planet.

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



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