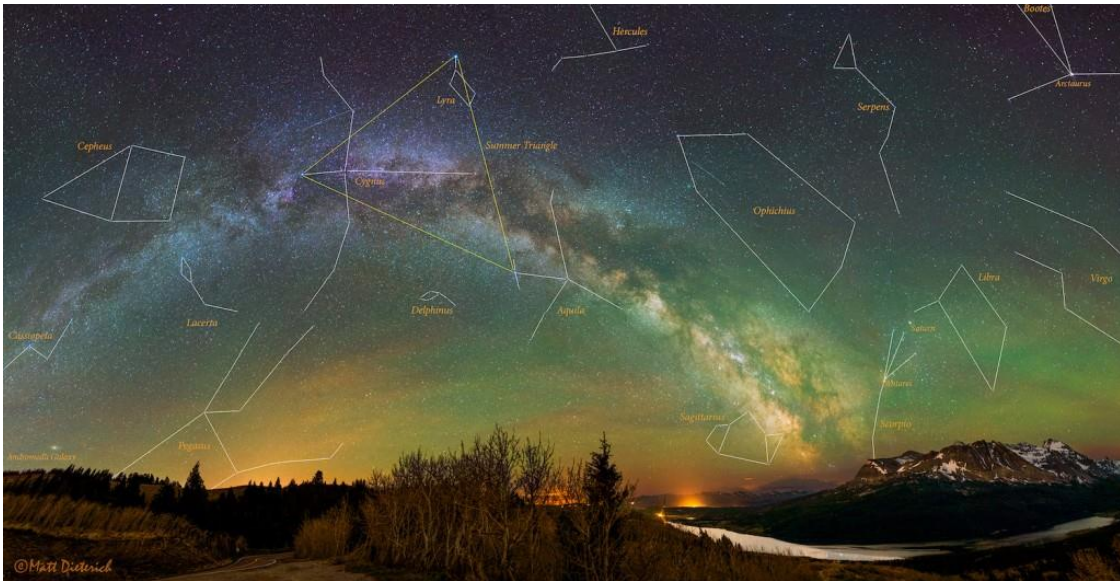


What's Up in the Night Sky for NOVEMBER



Presented by

Photonverse

November 2025 Night Sky - Meteors, Comets, Planets & Deep Sky Objects

<https://www.youtube.com/watch?v=ARHEy1H6KPo>

Cosmic Explorer

November 2025 Sky Events: Biggest Supermoon, Meteor Showers & Planetary Wonders

<https://www.youtube.com/watch?v=T2obZJG6HM>

Discovery Alert: 'Baby' Planet Photographed in a Ring around a Star for the First Time!

Chelsea Gohd September 30, 2025



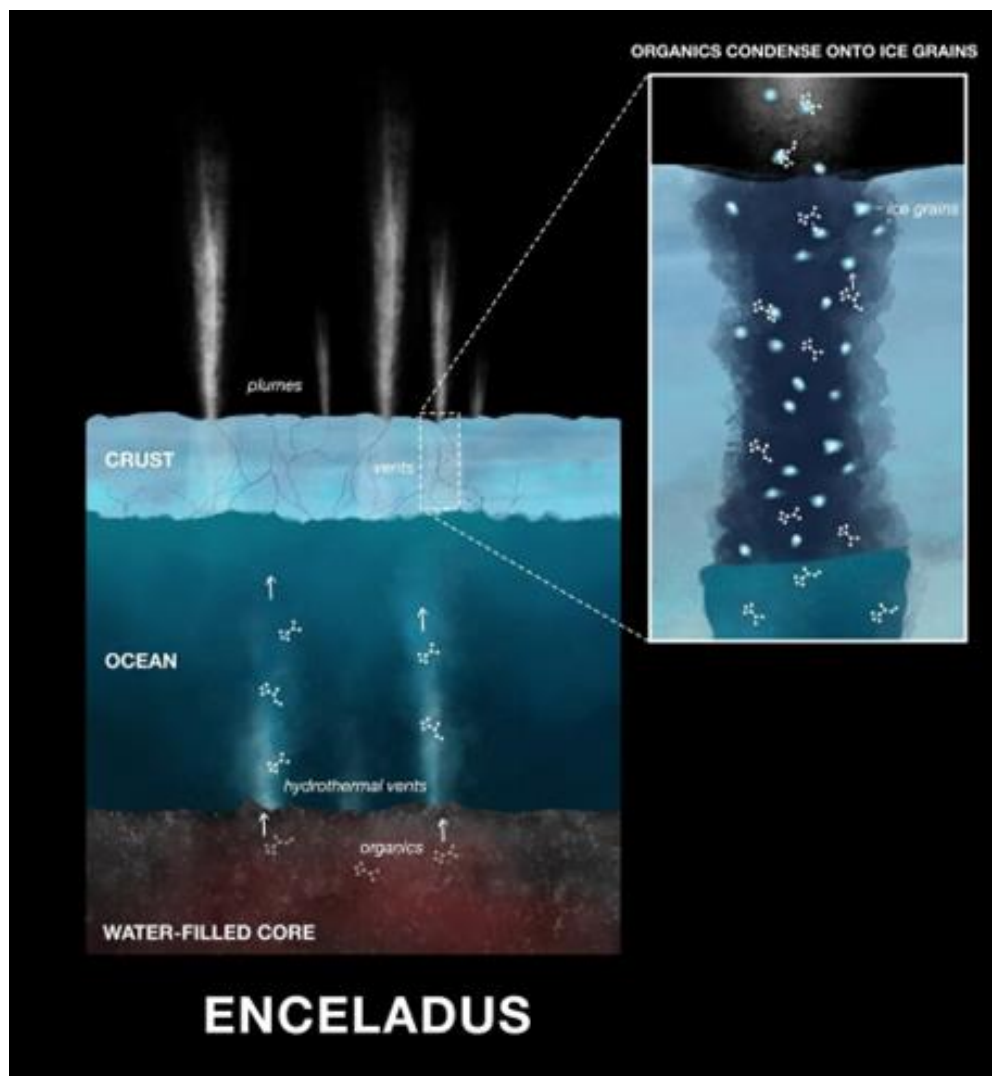
This image of the WISPIT 2 system was captured by the Magellan Telescope in Chile and the Large Binocular Telescope in Arizona. The protoplanet WISPIT 2b is a small purple dot to the right of a bright white ring of dust surrounding the system's star. A fainter white ring outside of WISPIT 2b can be seen.

Researchers have discovered a young protoplanet called WISPIT 2b embedded in a ring-shaped gap in a disk encircling a young star. While theorists have thought that planets likely exist in these gaps (and possibly even create them), this is the first time that it has actually been observed.

Researchers have directly detected – essentially photographed – a new planet called WISPIT 2b, labeled a protoplanet because it is an astronomical object that is accumulating material and growing into a fully-realized planet. However, even in its "proto" state, WISPIT 2b is a gas giant about 5 times as massive as Jupiter. This massive protoplanet is just about 5 million years old, or almost 1,000 times younger than the Earth and about 437 light-years from Earth. For more information click the link: <https://tinyurl.com/6ph4h8v4>

Cassini Proves Complex Chemistry in Enceladus Ocean

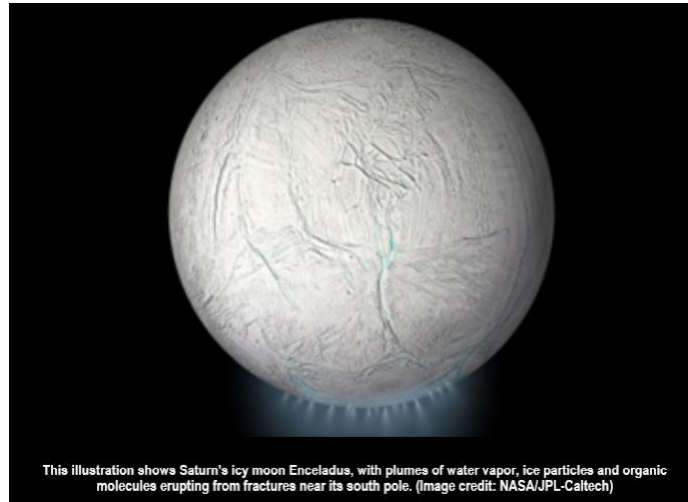
October 1, 2025



Scientists digging through data collected by the [Cassini](#) spacecraft have found new complex organic molecules spewing from Saturn's moon Enceladus. This is a clear sign that complex chemical reactions are taking place within its underground ocean. Some of these reactions could be part of chains that lead to even more complex, potentially biologically relevant molecules. Click the link to read more: <https://tinyurl.com/2sz76tpr>

Europe Wants to Launch a Life-Hunting Mission to Saturn's Icy Ocean Moon Enceladus

Andrew Jones September 27, 2025

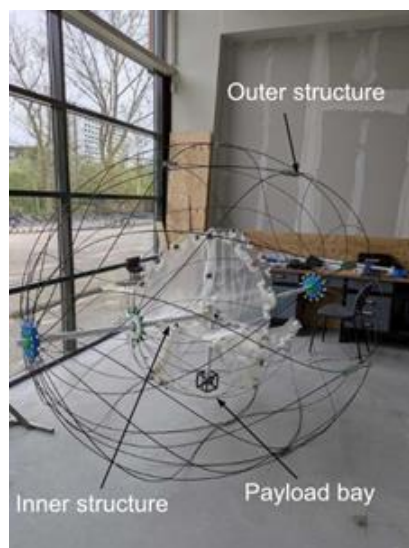


The European Space Agency (ESA) is setting the long-term goal of sending a spacecraft to Saturn's icy moon Enceladus to answer key science questions and drive the development of new technologies.

[Enceladus](#) is one of the most intriguing moons in the [solar system](#) due to the discovery by NASA's [Cassini probe](#) of plumes of water ice erupting from the moon's south polar region. The find indicates geological activity on Enceladus, along with a subsurface ocean of liquid water — and perhaps even an environment capable of sustaining life. To read more click the link: <https://tinyurl.com/4sw54vca>

Tumbleweed Rover Tests Demonstrate Transformative Technology for Low-Cost Mars Exploration

September 25, 2025



A swarm of spherical rovers, blown by the wind like tumbleweeds, could enable large-scale and low-cost exploration of the Martian surface, according to results presented at the Joint Meeting of the Europlanet Science Congress and the Division for Planetary Sciences (EPSC-DPS) 2025.

Recent experiments in a state-of-the-art wind tunnel and field tests in a quarry demonstrate that the rovers could be set in motion and navigate over various terrains in conditions analogous to those found on Mars.

Tumbleweed rovers are lightweight, 5-metre-diameter spherical robots designed to harness the power of Martian winds for mobility. Swarms of the rovers could spread across the Red Planet, autonomously gathering environmental data and providing an unprecedented, simultaneous view of atmospheric and surface processes from different locations on Mars. A final, stationary phase would involve collapsing the rovers into permanent measurement stations dotted around the surface of Mars, providing long-term scientific measurements and potential infrastructure for future missions. To read more click: <https://tinyurl.com/zymw4xd4>

Exoplanet News: Humanity Surpasses 6,000 Confirmed Worlds

NASA has officially confirmed over 6,000 exoplanets as of September 2025, marking a monumental milestone in our quest to understand planetary diversity and the potential for life beyond Earth.

Highlights:

- **Rapid Growth:** Just three years ago, the count stood at 5,000. The surge is driven by missions like *TESS* and advanced detection techniques.
- **Planetary Diversity:**
 - 2,035 Neptune-like planets
 - 1,984 gas giants
 - 1,761 super-Earths
 - 700 rocky terrestrial planets
- **Exotic Worlds:** Discoveries include lava-covered planets, Styrofoam-light gas giants and worlds with gemstone clouds.
- **Habitable Zone Targets:** TOI-700 e and similar planets are prime candidates for hosting life, receiving just the right amount of stellar energy for liquid water.
- **Future Missions:** The upcoming *Nancy Grace Roman Space Telescope* and *Habitable Worlds Observatory* aim to study Earth-like planets around Sun-like stars.

This milestone reflects decades of international collaboration, citizen science and technological innovation. With over 8,000 candidate planets still awaiting confirmation, the pace of discovery is only accelerating.

A Closer Look at SpaceX's Mars Plan

Jon Kelvey October 1, 2025



A SpaceX Starship plunges through the Martian atmosphere in this illustration. Credit: SpaceX

Despite meeting all objectives of the 10th Starship test in August, SpaceX's goal of sending the first Starships toward Mars this decade may still be out of reach. Jon Kelvey examines the proposed plan and the required technologies.

Over the years, Elon Musk has continually revised his aspirational targets for SpaceX landing an unoccupied craft on the surface of Mars. In a 2016 talk before the International Astronautical Congress, he proposed landing a variant of SpaceX's Dragon capsule by 2018, only to shift a year later and suggest the still-nascent Starship could touch down on the red planet in 2022.

"I feel fairly confident that we can complete the ship and be ready for a launch in about five years," he told 2017 IAC attendees, which could have paved the way for landing two crewed Starships on Mars by 2024. To read more click: <https://tinyurl.com/369v7a3a>

Mysterious Molecule Found on Brown Dwarf Casts Further Doubt on Potential Signs of Life on Venus

October 2, 2025

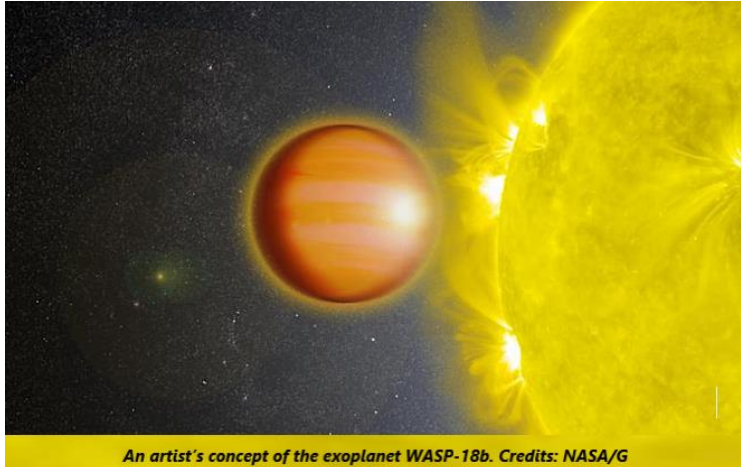
Brown dwarfs: too small to be stars, too big to be planets.

Only discovered in the 1990s, these in-between cosmic objects aren't big enough to burn as hot and bright as a true star, instead usually giving off a warm dim glow.

In [new research published today](#) in Science, a team of astronomers report the detection of a surprising substance in a brown dwarf known as Wolf 1130C: a chemical called phosphine, which has been the focus of controversial claims for [evidence of life of Venus](#). To get the full story click on the following link: <https://tinyurl.com/ytzvrumy>

The First 3D Temperature Map of a Distant Exoplanet

Keith Cowing October 29, 2025



Astronomers have generated the first three-dimensional map of a planet orbiting another star, revealing an atmosphere with distinct temperature zones, one so scorching that it breaks down water vapor, according to a new paper published in the journal *Nature Astronomy* on October 28, 2025.

Co-led by the University of Maryland and Cornell University, the research details the team's effort to create a temperature map of WASP-18b, a gas giant known as an "ultra-hot Jupiter," located 400 light-years from Earth. The group's map is the first to apply a technique called 3D eclipse mapping, also known as spectroscopic eclipse mapping. This study builds on a 2D model that members of the same team published in 2023, which demonstrated eclipse mapping's potential to tap into highly sensitive observations by NASA's James Webb Space Telescope (JWST). For more information click the link: <https://tinyurl.com/3cpuzpp5>

OCTOBER BLOG SERIES & EDUCATOR TOOLKIT

Chapters 1 - 4 of the *Alpha Centauri* blog series are now available as part of my October outreach. You can download all four chapters at no cost from my e-store. I've also created a free companion Educator Toolkit, which includes the full blog series and a mini course designed to support classroom and outreach use.

Visit the e-store: <https://www.centiastro.space.com/merch>

Once there, scroll down to **Digital Downloadables** and click the **SHOP** button to view all digital products.

Or go directly to the items:

- [Alpha Centauri Blog Series \(Chapters 1–4\)](#)
- [Alpha Centauri Educator Toolkit + Mini Course](#)

What's Coming in November

Starting this month, subscribers will receive Chapter 1 of each new monthly blog series. To access the full journey, including Chapters 2 - 4 and a synopsis there will be a one-time fee of **\$20 per series**.

Each month will also feature a separate Educator Toolkit available for a **\$45 license fee**, which includes:

- All four blog chapters
- A companion mini course with lessons and classroom resources
- YouTube links to podcasts and “Chat Over Coffee” segments
- Inquiry-based activities for educators, homeschoolers, and outreach leaders

This format allows anyone to access the blog series and educational resources on demand, without needing a membership. Educators and individuals can download what they need, when they need it -- no subscriptions, no barriers.

Sponsorship Opportunity

I’m currently seeking sponsors who would like to gift educator toolkits to their preferred schools or outreach programs. Sponsored toolkits mean educators receive full access at no cost to them, helping expand science engagement where it’s needed most.

If you have any questions about this new endeavor, feel free to reach out:

- Website: www.centiastro.space
- Email: centiaastro.space@gmail.com or [centiaastro.space@centiaastro.space.com](mailto:centiaastro.space@centiaastro.space)
- Phone: 716-338-7596 (please leave a message with your contact info -- I return all calls but don’t answer unknown numbers)



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