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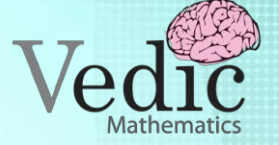
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## Space & Astronomy:

### New Discovery & Missions

**New Uranus Moon Discovered:** NASA has confirmed the discovery of a 29th moon orbiting Uranus. This faint, small moon was found using the James Webb Space Telescope, highlighting the telescope's ability to detect faint, distant objects that were missed by previous missions like Voyager 2.

**X-37B Launch:** The U.S. Space Force, in collaboration with the Air Force Rapid Capabilities Office, launched the eighth mission of the X-37B Orbital Test Vehicle (OTV-8) from Kennedy Space Center on a SpaceX Falcon 9 rocket. The mission will test next-generation technologies, including laser communications and an advanced quantum inertial sensor for navigation in GPS-denied environments.

### Planetary Events & Observational Highlights

**Venus-Mercury Conjunction:** A notable cosmic alignment occurred today, as Venus and Mercury converged in the constellation Cancer.

**Waning Crescent Moon:** The moon is in a waning crescent phase today, with only about 3% of its surface visible from Earth as it approaches the new moon phase.

**Upcoming Saturn Opposition:** While not happening today, a major upcoming astronomical event is the opposition of Saturn on September 21, when it will be directly opposite the sun in the sky and appear especially bright to observers.

### Other News

**NASA's New Astronaut Class:** NASA is set to debut its 2025 class of astronaut candidates on September 22. These candidates will undergo training for future missions to low Earth orbit, the Moon, and Mars, including the upcoming Artemis II mission no later than April 2026.

**Hubble and Webb Updates:** Recent research using the Hubble Space Telescope has refined the size of the interstellar object 3I/ATLAS and confirmed its cometary nature. Meanwhile, the Webb telescope's data has helped narrow the atmospheric possibilities for the exoplanet TRAPPIST-1 d.

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### MCQS

1. What astronomical object was discovered using the James Webb Space Telescope, bringing the total number of known moons for that planet to 29?

- A) A new moon of Jupiter
- B) A new moon of Mars
- C) A new moon of Saturn
- D) A new moon of Uranus

**Answer:** D) A new moon of Uranus

NASA's confirmation of a 29th moon orbiting Uranus was made possible by the powerful James Webb Space Telescope, which was able to detect the faint, distant object.

2. What is the primary purpose of the X-37B Orbital Test Vehicle (OTV-8) mission?

- A) To transport astronauts to the International Space Station.
- B) To test next-generation technologies like laser communications and advanced sensors.
- C) To deploy new satellites for a global telecommunications network.
- D) To conduct a manned mission to the Moon.

**Answer:** B) To test next-generation technologies like laser communications and advanced sensors.

The news explicitly states that the OTV-8 mission is designed to test advanced technologies for future space operations, including a quantum inertial sensor for navigation in GPS-denied environments.

3. When is the opposition of Saturn expected to occur, making it appear especially bright from Earth?

- A) August 21, 2025
- B) September 21, 2025
- C) October 21, 2025
- D) August 21, 2026

**Answer:** B) September 21, 2025

The news highlights the upcoming opposition of Saturn, a major astronomical event, which will take place on September 21, 2025.

4. According to the news, what is the key detail regarding the upcoming Artemis II mission?

- A) It is scheduled to launch no later than April 2026.
- B) It will be the first manned mission to Mars.
- C) It will be a completely unmanned test flight.
- D) It is scheduled for a launch in late 2025.

**Answer:** A) It is scheduled to launch no later than April 2026.

The news states that NASA's new astronaut class will be training for missions, including the





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Artemis II mission, which is set to launch no later than April 2026.

**5. What discovery about the interstellar object 3I/ATLAS was made using the Hubble Space Telescope?**

- A) It is a new type of asteroid.
- B) Its size has been refined, and its cometary nature was confirmed.
- C) It is a rogue planet without a star.
- D) It is a black hole.

**Answer:** B) Its size has been refined, and its cometary nature was confirmed.

Recent research utilizing the Hubble Space Telescope has provided more precise measurements of the object 3I/ATLAS and confirmed that it is a comet.



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