



Space & Astronomy:

Human Spaceflight & Missions:

Indian Astronaut Shubhanshu Shukla's Return from ISS: Group Captain Shubhanshu Shukla, India's first astronaut on the International Space Station (ISS) as part of the Axiom-4 mission, is expected to return to Earth today, July 14, 2025. He launched aboard a SpaceX Crew Dragon spacecraft on June 25 and has been conducting over 60 scientific experiments, including India-led space farming projects. His return marks a significant step for India's space ambitions and provides valuable insights for the Gaganyaan mission.

Gaganyaan Mission Progress: The Indian Space Research Organisation (ISRO) announced the successful completion of qualification tests for the Gaganyaan Service Module Propulsion System (SMPS) on July 12. A full-duration hot test of the SMPS for 350 seconds was conducted, validating its performance for flight and off-nominal mission profiles, including a Service Module-based abort during ascent. This critical milestone brings India closer to its first human spaceflight mission.

Tianzhou-9 Cargo Craft to China's Space Station: China has vertically transferred its Tianzhou-9 cargo spacecraft and a Long March-7 carrier rocket to the launch site in Wenchang. This mission will deliver supplies, including upgraded spacesuits and scientific equipment, to the Tiangong space station in the near future.

SpaceX Crew-11 Launch Preparations: NASA and JAXA astronauts are discussing the

upcoming Crew-11 launch to the ISS, which is scheduled for July 31, 2025.

Launches & Satellites:

SpaceX Falcon 9 Launches: SpaceX has several Falcon 9 launches scheduled for the coming days, including:

July 14: Starlink Group 15-2 from Vandenberg SFB, California.

July 15: Project Kuiper (KF-01) from Cape Canaveral SFS, Florida.

July 16: Starlink Group 17-3 from Vandenberg SFB, California.

Long March 7 | Tianzhou 9 Launch: China also has a Long March 7 launch scheduled for July 14, carrying the Tianzhou 9 cargo craft to the Tiangong space station.

Planetary Science & Exploration:

ESA's JUICE Mission Progress: The Jupiter Icy Moons Explorer (JUICE) mission, launched in April 2023, is continuing its cruise phase. It is currently on an eight-year journey to Jupiter, with a planned Venus flyby in August 2025, and two more Earth flybys in September 2026 and January 2029, before reaching Jupiter in July 2031. The mission aims to characterize Jupiter's ocean-bearing icy moons (Ganymede, Europa, and Callisto) as potential habitats and explore Jupiter's complex environment.

Policy & Other Developments:

US Senate Rejects NASA Science Program Cuts: The US Senate has rejected proposed cuts to NASA's science programs and prioritized





spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



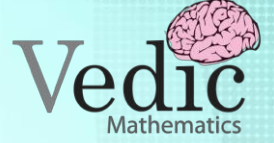
SpardhaGuru



Spardha.guru



www.spardha.guru



funding for Artemis missions, ensuring continued support for lunar exploration and other scientific endeavors. A new Republican-backed bill has passed, allocating significant funds for the ISS, Artemis programs, and even the relocation of the Space Shuttle Discovery.

Quantum-Safe Cybersecurity Roadmap for India: India's Ministry of Electronics and Information Technology (MeitY) has released a roadmap for transitioning to quantum-resilient cybersecurity systems. While not directly related to space, this is a crucial development for safeguarding national security, including space assets and communications, from future quantum computing threats.

Parker Solar Probe News: The Parker Solar Probe continues to capture images close to the Sun as its primary mission nears its end.

MCQS

1. When is Indian astronaut Group Captain Shubhanshu Shukla expected to return to Earth from the ISS?

- a) June 25, 2025
- b) July 12, 2025
- c) July 14, 2025
- d) July 31, 2025

Answer: c) July 14, 2025

The news states, "Group Captain Shubhanshu Shukla... is expected to return to Earth today, July 14, 2025."

2. What significant tests did ISRO successfully complete for the Gaganyaan mission's Service Module Propulsion System (SMPS)?

- a) Crew escape system tests.
- b) Qualification tests for flight and off-nominal mission profiles.

- c) Parachute deployment tests.
- d) Astronaut training simulations.

Answer: b) Qualification tests for flight and off-nominal mission profiles.

The news states, "The Indian Space Research Organisation (ISRO) announced the successful completion of qualification tests for the Gaganyaan Service Module Propulsion System (SMPS) on July 12... validating its performance for flight and off-nominal mission profiles..."

3. What is the purpose of China's Tianzhou-9 cargo spacecraft mission?

- a) To launch new astronauts to the ISS.
- b) To deploy a new scientific satellite.
- c) To deliver supplies, including upgraded spacesuits and scientific equipment, to the Tiangong space station.
- d) To perform a lunar sample return.

Answer: c) To deliver supplies, including upgraded spacesuits and scientific equipment, to the Tiangong space station.

The news states, "This mission will deliver supplies, including upgraded spacesuits and scientific equipment, to the Tiangong space station in the near future."

4. When is the SpaceX Crew-11 launch to the ISS scheduled for?

- a) July 14, 2025
- b) July 25, 2025
- c) July 31, 2025
- d) August 10, 2025

Answer: c) July 31, 2025

The news states, "NASA and JAXA astronauts are discussing the upcoming Crew-11 launch to the ISS, which is scheduled for July 31, 2025."

5. Which SpaceX Falcon 9 launch is scheduled for July 15 from Cape Canaveral SFS, Florida?





spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



SpardhaGuru



Spardha.guru



www.spardha.guru



- a) Starlink Group 15-2
- b) Project Kuiper (KF-01)
- c) Starlink Group 17-3
- d) Crew-11 mission

Answer: b) Project Kuiper (KF-01)

The news lists, "July 15: Project Kuiper (KF-01) from Cape Canaveral SFS, Florida."

6.What cargo craft is China launching with a Long March 7 rocket on July 14?

- a) A new Earth observation satellite.
- b) The Tianzhou 9 cargo craft.
- c) A new module for the Tiangong space station.
- d) A lunar rover.

Answer: b) The Tianzhou 9 cargo craft.

The news states, "China also has a Long March 7 launch scheduled for July 14, carrying the Tianzhou 9 cargo craft to the Tiangong space station."

7.When is ESA's JUICE mission planned to have a Venus flyby?

- a) April 2023
- b) August 2025
- c) September 2026
- d) July 2031

Answer: b) August 2025

The news states, "It is currently on an eight-year journey to Jupiter, with a planned Venus flyby in August 2025..."

8.Which of Jupiter's icy moons is JUICE specifically planning to orbit later in its mission?

- a) Europa
- b) Callisto
- c) Io
- d) Ganymede

Answer: d) Ganymede

The mission aims to "characterize Jupiter's ocean-bearing icy moons (Ganymede, Europa,

and Callisto)" and it's implied that Ganymede is a primary focus for detailed study. (Further research confirms JUICE will orbit Ganymede in 2034).

9.What did the US Senate reject regarding NASA's budget?

- a) Proposed increases to the Artemis missions.
- b) Cuts to NASA's science programs.
- c) Funding for the International Space Station.
- d) Relocation of the Space Shuttle Discovery.

Answer: b) Cuts to NASA's science programs.

The news states, "The US Senate has rejected proposed cuts to NASA's science programs and prioritized funding for Artemis missions..."

10.What is the primary goal of India's quantum-safe cybersecurity roadmap?

- a) To develop new quantum computing hardware.
- b) To secure the country's digital economy from future quantum computing threats.
- c) To establish international partnerships in quantum research.
- d) To regulate the use of artificial intelligence.

Answer: b) To secure the country's digital economy from future quantum computing threats.

The news states, "India's Ministry of Electronics and Information Technology (MeitY) has released a roadmap for transitioning to quantum-resilient cybersecurity systems, aiming to secure the country's digital economy from future quantum computing threats."

11.What is the Parker Solar Probe's status as its primary mission nears its end?

- a) It has concluded its operations.
- b) It is preparing for re-entry into Earth's atmosphere.





spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



SpardhaGuru



Spardha.guru



www.spardha.guru



c) It continues to capture images close to the Sun.

d) It has been repurposed for a mission to Mars.

Answer: c) The news states, "The Parker Solar Probe continues to capture images close to the Sun as its primary mission nears its end."

ಸ್ಪರ್ಧಾಗುರು
Spardhaguru India Private Limited

