Artemis II Crew Escapes Earth Orbit, Journey to Moon Begins

Description

The Artemis II astronauts left Earth orbit and are now heading towards the moon. They activated their main engine for almost six minutes, reaching a speed of 24,500 mph. This speed is necessary to escape Earth's gravity.

The crew, including commander Reid Wiseman, Victor Glover, Christina Koch, and Canadian astronaut Jeremy Hansen, managed a key engine firing called "trans-lunar injection" (TLI). This maneuver increased their speed by 867 mph. The engine ignited at 7:49 p.m. EDT at an altitude of 115 miles. After this, the Orion capsule embarked on a free-return path around the moon, which will allow the astronauts to return to Earth without further major engine burns.

Hansen communicated with mission control after the burn, expressing the crew's excitement about their journey. He reminded everyone involved in the Artemis program of their hard work and determination. NASA Administrator Jared Isaacman watched from mission control in Houston. He aims to make moon flights happen twice a year, establishing a U.S. base near the moon's south pole.

After their launch from Kennedy Space Center, the crew tested the Orion capsule's systems and adjusted their orbit for the upcoming loop around the moon. NASA's Mission Management Team approved the TLI burn after confirming the spacecraft's performance. The Artemis II mission is significant as it prepares astronauts for future lunar landings, expected to start in 2028.

Vocabulary List:

1. **orbit** //ˈɔrbɪt// (noun): the curved path around a planet or star
2. **maneuver** //məˈnuvər// (noun): a planned movement or action to achieve something
3. **ignited** //ɪgˈnaɪtɪd// (verb): started to burn fuel and produce thrust
4. **altitude** //ˈæltɪˌtud// (noun): height above the ground or above sea level
5. **embarked** //ɪmˈbɑrkt// (verb): began a journey or started a new trip
6. **significant** //sɪgˈnɪfɪkənt// (adjective): important or large enough to notice

Comprehension Questions

Multiple Choice

1. What speed did the Artemis II astronauts reach to escape Earth's gravity?

Option: 12,000 mph
Option: 20,000 mph
Option: 24,500 mph
Option: 30,000 mph

2. Who is the commander of the Artemis II crew?

Option: Victor Glover
Option: Christina Koch
Option: Reid Wiseman
Option: Jeremy Hansen

3. What does TLI stand for in the context of the Artemis II mission?

Option: Trans-lunar ignition
Option: Trans-lunar injection
Option: Trajectory lunar initiative
Option: Total lunar impact

4. At what altitude was the TLI burn ignited?

Option: 100 miles
Option: 115 miles
Option: 150 miles
Option: 200 miles

5. What is the goal of NASA Administrator Jared Isaacman regarding moon flights?

Option: One flight per year
Option: Two flights per year
Option: Three flights per year
Option: No plans for moon flights

6. What is the expected start year for future lunar landings according to the Artemis II mission's significance?

Option: 2025
Option: 2026
Option: 2027
Option: 2028

True-False

7. The Artemis II astronauts left Earth orbit and are traveling to Mars.

8. The crew includes a Canadian astronaut named Jeremy Hansen.

9. The Orion capsule is designed to allow astronauts to return to Earth without any engine burns.

10. The TLI maneuver increased the astronauts' speed by 867 mph.

11. NASA's Mission Management Team disapproved of the TLI burn due to spacecraft performance issues.

12. The Artemis II mission seeks to establish a U.S. base near the moon's north pole.

Gap-Fill

13. The Artemis II astronauts reached a speed of 24,500 mph to escape _____ gravity.

14. The TLI burn was ignited at 7:49 p.m. EDT at an altitude of _____ miles.

15. The Orion capsule embarked on a _____-return path around the moon.

16. The Artemis program aims for astronauts to start future lunar landings in _____.

17. NASA Administrator Jared Isaacman watched from mission control in _____.

18. The engine firing helped to increase speed by _____ mph.

Answer

Multiple Choice: 1. 24,500 mph 2. Reid Wiseman 3. Trans-lunar injection 4. 115 miles 5. Two flights per year 6. 2028
True-False: 7. False 8. True 9. False 10. True 11. False 12. False
Gap-Fill: 13. Earth's 14. 115 15. free 16. 2028 17. Houston 18. 867

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1. Sci/Tech - LEVEL3

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