For the first time in 51 years, NASA is training astronauts to fly to the Moon

Enlarge / Astronauts Victor Glover, Christina Koch, Reid Wiseman, and Jeremy Hansen are joined by an instructor (background) on the first day of Artemis II crew training.

reader comments

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The four astronauts assigned to soar beyond the far side of the Moon on NASA's Artemis II mission settled into their seats inside a drab classroom last month at the Johnson Space Center in Houston. It was one in a series of noteworthy moments for the four-person crew since NASA revealed the names of the astronauts who will be the first people to fly around the Moon since 1972.

There was the fanfare of the crew's unveiling to the public in April and an appearance on *The Late Show with Stephen Colbert*. There will, of course, be great anticipation as the astronauts close in on their launch date, currently projected for late 2024 or 2025.

But many of the crew's days over the next 18 months will be spent in classrooms, on airplanes, or in simulators, with instructors dispensing knowledge they deem crucial for the success of the Artemis II mission. In the simulator, the training team will throw malfunctions and anomalies at the astronauts to test their ability to resolve a failure that—if it happened in space—could cut the mission short or, in a

worst-case scenario, kill them.

“In order to do those things, what knowledge do we have to impart to them? What skills do we have to teach them?” said Jacki Mahaffey, NASA’s leading training officer for the Artemis II mission. “Overall, our goal is we’ve got a little bit in the classroom, but the more that we can get the crew in front of the displays in the vehicle mockups and really kind of immersed in that environment, the sooner, the better.

Commander Reid Wiseman and his crewmates—pilot Victor Glover, mission specialist Christina Koch, and Canadian astronaut Jeremy Hansen—were named to the Artemis II crew on April 3. Much of their time over the next two-and-a-half months was devoted to making a public relations tour, giving interviews, going to NASA centers around the country, visiting Capitol Hill, and meeting with Canadian Prime Minister Justin Trudeau.

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Mahaffey said they also got a pre-training pep talk from Charlie Duke, who walked on the Moon on the Apollo 16 mission in April 1972. NASA hasn’t trained a crew to fly to the Moon since Apollo 17 at the end of 1972, the last time astronauts walked on the lunar surface.

Duke, now 87, told Ars he was excited to meet with the Artemis II crew and other members of NASA’s astronaut corps.

“It’s behind schedule, but, man, they’re pressing on,” Duke said. “They’ve got a great adventure ahead of them. So I wish them well, with their vehicles and the training and all.”

Training for the Moon

The Artemis II crew marked their first official training day on June 21. Like the start of many college courses, it began with a preview of the syllabus. Then, in the afternoon, the astronauts received a lesson on lunar orbital mechanics,

according to Mahaffey.

Most of the crew’s lessons in June and July have been focused on “fundamentals” to give the astronauts a sense of the mission’s flight plan, the Orion spacecraft, and the Space Launch System rocket that will propel them into orbit. “It’s just a high-level overview of what all these things are, a general familiarization and orientation with what everything looks like, the basic ways to interact with the displays and some of the other hands-on pieces of the spacecraft,” Mahaffey said.

The Artemis II mission will last about 10 days, beginning with a launch from NASA’s Kennedy Space Center in Florida that will place their Orion capsule into a nearly day-long high-altitude orbit around Earth for critical checkouts of the ship’s life support systems and a test of the spacecraft’s ability to approach another object in space. The life support system was not part of the unpiloted Artemis I test flight with the SLS Moon rocket and Orion spacecraft last year, and future Artemis missions will rely on Orion rendezvousing with a lunar landing craft in deep space.

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