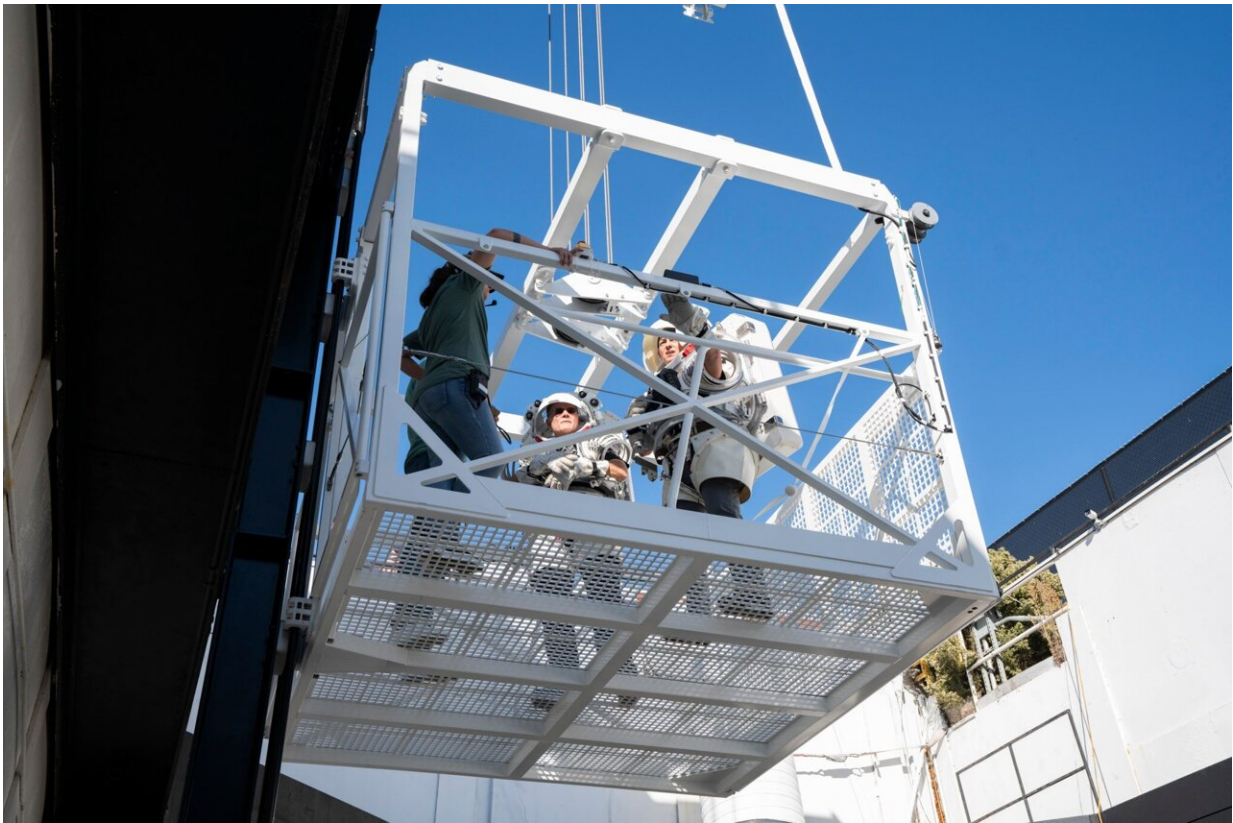


NASA astronauts test SpaceX elevator concept for Artemis lunar lander

December 21 2023, by Lee Mohon



Credit: SpaceX

NASA astronauts Nicole Mann and Doug "Wheels" Wheelock participated in a recent test of a sub-scale mockup elevator for SpaceX's Starship human landing system that will be used for NASA's Artemis III

and IV missions to the moon. The Starship human landing system will carry two astronauts from the Orion spacecraft in lunar orbit to the surface, serve as a habitat for crew members' approximately one week stay on the moon, and transfer them from the surface back to Orion.

The [elevator](#) will transport equipment and crew between Starship's habitable area, located near the top of the lander, and the [lunar surface](#), as they exit for moonwalks. The test allowed the astronauts to interact with a flight-like design of the elevator system, serving as both a functional demonstration of the hardware and providing the chance to receive valuable feedback from a crew perspective.

Built at SpaceX's facility in Hawthorne, California, the elevator mockup has a full-scale basket section with functioning mechanical assemblies and crew interfaces for testing. During the demonstration, NASA [astronauts](#) wore spacesuits that simulate the suit size and mobility constraints that crew will face on the moon. For Artemis III, the crew will wear new advanced spacesuits being developed by Axiom Space.

The suited crew provided feedback on elevator controls, such as gate latches, ramp deployment interfaces for moving into and out of the elevator basket, available space for cargo, and dynamic operations while the basket moved along a vertical rail system.

NASA is working to land the first woman and first person of color on the moon under Artemis to explore more of the lunar surface than ever before and prepare to send humans to Mars for the benefit of all. The human landing system is a critical piece of deep space exploration architecture, along with the Space Launch System rocket, Orion spacecraft, advanced spacesuits and rovers, and the Gateway in orbit around the moon.

Provided by NASA

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