



National Aeronautics and
Space Administration

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Committee on Science, Space and Technology Subcommittee on Space and Aeronautics

U.S. House of Representatives

Statement by:

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Directorate, NASA

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Statement of
Catherine Koerner
Associate Administrator for Explorations Systems Development Mission Directorate
National Aeronautics and Space Administration

before the

Subcommittee on Space & Aeronautics
House Science, Space & Technology

Chairman Babin, Ranking Member Sorensen and distinguished members of the Subcommittee, thank you for the opportunity to testify on NASA's Artemis program. Under the Artemis program, the United States, along with our international and commercial partners, will return humans to the Moon to explore, conduct scientific research, and establish the capability for a long-term human presence on and around the Moon. Then, using what we learn at the Moon, we will take the next giant leap: sending the first humans to Mars.

In November 2022, NASA took the first major step in America's return to the Moon with the Artemis I mission. That historic launch and 25 and a half-day mission tested the Space Launch System (SLS) rocket, the Orion spacecraft, and the Exploration Ground Systems in preparation for Artemis II. On Artemis II, NASA Astronauts Reid Wiseman, Victor Glover, Christina Koch, and Canadian Astronaut Jeremy Hanson will journey beyond low-Earth orbit and around the Moon – the farthest humans have journeyed into space in more than 50 years. Approximately one year after Artemis II, the Artemis III crew will land at the lunar South Pole and begin building out a robust, long-term lunar exploration program. With Artemis IV, astronauts will again visit the lunar surface and start assembly of a space station in lunar orbit called the Gateway.

NASA's plan for a successful and sustainable return to the Moon requires the development of several new space systems, including the SLS rocket, the Orion spacecraft, the Exploration Ground Systems, lunar landers, the Gateway space station, and new lunar spacesuits and lunar rovers. Last year, pursuant to the NASA Authorization Act of 2022, NASA established the Moon to Mars program office, which focuses on development of these new systems, mission integration, and risk management across the portfolio. This new office also leads planning and analysis for long-lead technology developments to support human Mars missions.

In the year since NASA's successful Artemis I flight test around the Moon, NASA has continued to refine the schedule of the follow-on Artemis missions, based on data from the Artemis I

mission and the readiness of the space systems needed to safely transport our crews from Earth to the lunar surface and back. Artemis II adds several new systems to support astronauts inside Orion. In addition, we are continuing to study the Orion heat shield from Artemis I, to ensure the safety of our crew on future missions. Based on these factors, we are planning for Artemis II to launch in September 2025. Artemis III will build on the progress of Artemis I and II and adds a commercial lunar lander and advanced spacesuits for walking on the lunar surface. In 2026, Artemis III will send humans back to the surface of the Moon.

While sending humans back to the Moon will be a significant accomplishment, we do not intend to stop there. NASA's long-term goal is to send humans to Mars – and the Moon will help us get there. Mars is a rich destination for scientific discovery and a driver of technologies that will enable humans to travel and explore far from Earth. By using what we learn on and around the Moon under Artemis, NASA is working to understand and overcome the future challenges associated with landing and living on Mars. As NASA builds a blueprint for human exploration throughout the solar system for the benefit of humanity, we conducted our first two Architecture Concept Reviews, the culmination of a robust analysis process designed to align NASA's Moon to Mars exploration strategy and codify the supporting architecture. This annual review is a milestone that enables our Moon to Mars strategy to evolve over time as we consider lessons learned from previous missions and provide opportunities to on-ramp new technologies as well as new industry and international partners.

Through the Artemis campaign, NASA is partnering with the most diverse and broadest exploration coalition in history, including multiple international and commercial partners. For example, NASA's Gateway Program is an international collaboration with the Canadian Space Agency, European Space Agency, Japan Aerospace Exploration Agency, and now the United Arab Emirates' Mohammed bin Rashid Space Centre, to establish humanity's first space station around the Moon. Similarly, NASA is exploring additional international partnerships for lunar surface habitats, logistics, and mobility capabilities that will enable long-term human presence and enhanced science returns.

Together, we will continue to develop the technology and systems needed to live and work on and around the Moon in preparation for human missions to Mars. Because of our diverse astronaut corps, we will enable the first woman, the first person of color, and the first international astronaut to walk on the Moon. We will align with partners toward a future of expanded economic opportunity and scientific discovery, while investing in the next generation of STEM leaders as we support the limitless possibilities of space exploration.

NASA is grateful for this committee's continued support of the Artemis program, and I appreciate this opportunity to update you on behalf of NASA and our Artemis partners and would be pleased to answer your questions.