Mars Desert Research Station Crew 303 Completes Successful Analog Astronaut Mission in Utah

HANKSVILLE, UT, UNITED STATES, December 15, 2025 / EINPresswire.com/ -- Mars Desert Research Station (MDRS), owned and operated by the Mars Society, is pleased to announce the successful completion of an analog astronaut mission conducted by Crew 303 at its Utah-based research facility. The Earth-based mission focused on simulated off-world living, applied research, and operational testing in Mars-like terrain, contributing data and insights relevant to future human exploration efforts.

Crew 303 carried out the analog astronaut mission under structured conditions designed to replicate the isolation, resource limitations, and operational discipline associated with planetary exploration. Daily activities followed established mission protocols, with crew members performing research, engineering tasks, documentation, and field operations within a high-fidelity analog environment. The mission emphasized interdisciplinary collaboration while maintaining realism in mission planning and execution.

Flight suit evaluations were conducted using garments produced by Girl In Space Club, an organization focused on inclusive aerospace design. Two suits were tested during the analog astronaut mission: a new fire-resistant men's prototype and a patent-pending women's flight suit. The women's flight suit was field-tested by its founder for the first time under analog mission conditions, allowing performance, comfort, and durability to be assessed during simulated off-world operations.

"Wearing this suit on mission and becoming the first recorded analog astronaut to wear heels while doing it, was more than a fun milestone," said Sydney Phillips, Executive Officer of Crew 303. "It was a statement: exploration shouldn't require us to shrink ourselves. We can lead, innovate, and express individuality all at once."

“GIRL IN SPACE CLUB tested two suits during the Mars simulation: a new fire-resistant men’s prototype and our women’s flight suit, which we field-tested ourselves for the first time,” added Sabrina Thompson, Artist in Residence for Crew 303. “Both performed strongly under analog mission conditions.”
Engineering activities included the assembly and testing of a rover prototype, with students participating directly in the build process. Rover testing took place in terrain selected for its similarity to Martian surface features, enabling evaluation of mechanical performance, operational workflows, and team coordination under mission constraints.

“The Mars simulation allowed me to assemble and test a rover kit on realistic terrain, and managing operations as the Crew Engineer gave me insight into how a real astronaut team functions,” stated Aditya Kothari, Engineer for Crew 303.

Astronomy operations were conducted throughout the mission, supported by the region’s exceptionally dark skies. Observations included imaging of distant galaxies, the Milky Way, and the Sun, contributing both scientific data and experiential insight into observational work during analog missions.

“As Crew Astronomer for MDRS Crew 303, I experienced some of the darkest skies on Earth, seeing billions of stars, the Milky Way, and imaging distant galaxies and the Sun,” said Vikram Kothari. “It was a powerful reminder of why exploration matters.”

Crew leadership and responsibilities were clearly defined throughout the mission. Michael Andrews served as Commander, overseeing mission coordination. Sydney Phillips acted as Executive Officer. Sabrina Thompson served as Artist in Residence. Aditya Kothari held the role of Engineer, Vikram Kothari served as Astronomer, Aiden Westerland documented the mission as Journalist, and Eli Henry served as Health and Safety Officer.

The analog astronaut mission conducted by Crew 303 demonstrates how Earth-based research and simulated off-world living at Mars Desert Research Station support the testing of technology, human factors, and operational strategies. Data and experience gained through such missions continue to inform exploration research while advancing interdisciplinary collaboration.

To learn more, please visit www.marssociety.org.

About the Mars Society

The Mars Society is an international, non-profit organization founded in 1998 to advance the goal of human exploration through research, advocacy, and public engagement. The organization owns and operates the Mars Desert Research Station in Utah, one of the world’s longest-running analog astronaut research facilities. Mars Desert Research Station supports Earth-based research by providing a controlled environment for testing technologies, studying

human performance, and conducting simulated off-world missions in Mars-like terrain.

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