COMMITTEE ON
SCIENCE, SPACE, AND TECHNOLOGY
REPUBLICANS Frank Lucas, Ranking Member

Opening Statement of Ranking Member Frank Lucas

Subcommittee on Space and Aeronautics Hearing, "What do Scientists Hope to Learn with NASA's Mars Perseverance Rover?"

April 29, 2021

Thank you for holding this hearing, Mr. Chairman.

When NASA's Perseverance rover landed on Mars in February, it became the eighth craft to successfully land on the Martian surface in a little over 40 years. Every one of these vehicles were American made and each of these explorers built on the technology and scientific knowledge gained from the craft which came before it.

Perseverance's ambitious mission continues this legacy of innovation. The vehicle is searching for signs of ancient life as we speak, and it's helping us gain a better scientific understanding of the Red Planet.

In addition to its scientific mission, Perseverance is helping us demonstrate new technologies which will help aid future exploration of other planetary bodies, both through robotic and human missions. A few weeks ago, we saw the launch of a small helicopter named Ingenuity, which made the first powered flight on another planetary body. Ingenuity has now made three flights, each lasting longer and traveling greater distances.

Additionally, Perseverance includes a technology demonstration called MOXIE. This instrument's purpose is to take the Martian atmosphere, which is mostly carbon dioxide, and create breathable air. The first demonstration was successful, producing about ten minutes of breathable air for an astronaut.

Later, Perseverance will collect several samples of Martian soil, which will be left on the Martian surface. These samples will eventually be retrieved by a future mission and returned to Earth for research. There are many other cutting-edge and inspiring facets to Perseverance, each of which are laying the groundwork for future crewed exploration of Mars.

Though the U.S. has demonstrated unique leadership in Martian exploration, we are not the only ones interested in exploring the solar system. In the weeks leading up to Perseverance's landing, a craft managed by the United Arab Emirates entered orbit.

Additionally, another spacecraft made by China entered orbit, the first vehicle from that country to do so.

In the coming months, China will attempt to become the second country to join the U.S. in successfully landing a rover on Mars. This comes little more than two years after China first successfully landed a craft on the far side of the Moon, and only months after China became the second country to successfully return samples of the Lunar surface to Earth. Less than 12 hours ago, China launched the first module of a new space station which it hopes to have completed by the end of next year.

With these recent moves, the Chinese Communist Party has all but declared its intent to challenge U.S. leadership in space. These recent examples serve as stark reminders of why we need to avoid complacency in our space program. We must be mindful of this as our Committee considers how best to increase investments in basic research and develop a new generation of STEM participants.

We have seen repeatedly the power of NASA's missions to inspire future generations. I was pleased by the Biden Administration's public support for the continuation of the Artemis program, which will return American astronauts to the Lunar surface this decade and lay the groundwork for future human exploration of Mars. Now, Congress must do our part and ensure that NASA has the resources and direction it needs to execute this mission.

I want to thank our witnesses for being here today and sharing their experiences working on this inspiring mission. I look forward to hearing ways this Committee can continue to inspire future generations. Thank you, and I yield back my time.