

OPENING STATEMENT
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of the Subcommittee on Space

House Committee on Science, Space, and Technology
Subcommittee on Space
“*Private Sector Lunar Exploration*”
September 7, 2017

Before I begin Mr. Chairman, I want to express my sympathies to you, to the constituents of your district, the employees of the NASA Johnson Space Center, and to all those affected by Hurricane Harvey. Our thoughts and prayers go out to them.

Good morning. And welcome to our distinguished panel. Thank you, Mr. Chairman, for calling this hearing to examine private sector lunar explorations plans and proposals.

Forty eight years ago, Neil Armstrong and Buzz Aldrin touched down on the Moon, imprinting mankind’s first footsteps on the Moon’s surface. When astronauts Eugene Cernan and Harrison Schmitt lifted off from the lunar surface on December 14, 1972, they couldn’t imagine that they would be the last humans to visit the Moon for nearly a half-century and counting. Exactly when *humans* will return on the lunar surface is uncertain. However, what is clear is that we are on the doorstep of a renaissance in Moon exploration.

Soon, the Moon may entertain many visitors in the form of robotic spacecraft and rovers from many countries. And some, as we will hear today, will be owned and operated by commercial entities. Innovative technologies that will enable testing and demonstrations may one day lead to routine cargo—and perhaps even human—flights to and from the Moon and help promote increased economic activity in space. However, we should not forget that there remains important scientific research left to be done on the Moon.

A 2007 National Academies report identified several scientific priorities for moon exploration including the exploration of the lunar poles. According to the report, the South Pole Aitken Basin, in particular, is a priority for further scientific exploration because it is the "*oldest and deepest observed impact structure on the Moon and the largest in the Solar System*". Determining a formation date of this impact basin is critical for understanding lunar chronology and the 2011 Academies’ planetary science decadal survey also highlighted the need for research on the South Pole Aitken Basin.

I raise this point about scientific research in response to the possibility of commercial resource extraction and utilization on the Moon. In particular, we need to understand what ways, if any, commercial missions to the Moon may potentially impact future scientific investigations.

However, the aforementioned 2007 National Academies report noted the same data sets that are needed for exploration of lunar resources are also necessary for understanding the geochemical evolution of the Moon.

Mr. Chairman, there is a potential opportunity for commercial entities and the scientific community to collaborate on acquiring data and research that would support both their interests. This is a worthwhile collaboration for us to encourage.

Key questions I hope we will address at today's hearing include:

- What are the market drivers for commercial efforts to explore the Moon?
- Who are the projected customers for planned private lunar exploration services and what services will be provided to those customers?
- How is NASA currently collaborating with the private sector on exploration of the Moon? Are the current models of partnership working well?
- Are there opportunities for the private sector to collaborate with the science community on their exploration plans?

Mr. Chairman, we clearly have many things to discuss this morning. I look forward to hearing from our witnesses about the opportunities and challenges in establishing a sustainable space economy on the Moon.

Thank you and I yield back.