OPENING STATEMENT

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of the Subcommittee on Space

Committee on Science, Space, and Technology
Subcommittee on Space
"An Update on NASA Exploration Systems Development"
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Good morning. And welcome to our distinguished panel. Thank you Mr. Chairman for calling this hearing to receive an update on NASA's exploration systems development activities.

NASA continues to progress, under challenging circumstances, in developing key elements needed to move humans beyond low-Earth orbit and eventually send them to Mars. Construction of the Space Launch System, the Orion Crew Vehicle, and ground infrastructure at the Kennedy Space Center is well underway. Major components for Exploration Mission-1, also known as EM-1, and EM-2 are undergoing fabrication and testing. For example:

- In August 2017, NASA completed welding the liquid oxygen tank that is scheduled for use on the SLS launch vehicle to be flown on EM-1;
- The Orion spacecraft destined for EM-1 was successfully powered up for the first time in August 2017; and
- On October 19, 2017, NASA engineers conducted a full-duration, 500-second test of one of the RS-25 flight engines to be used on EM-2.

NASA and industry partners have not undertaken a rocket development program of this scale for more than three decades. In addition to new hardware and infrastructure, this has necessitated re-establishing critical capabilities needed for U.S. leadership in deep space exploration. This is not just the work of NASA and its prime contractors. Over one thousand suppliers spread across every state are part of this program. However, a program of this size does not happen without challenges, and NASA's human space exploration program is facing several, including having to

- maintain manufacturing, test, and processing schedules as SLS, Orion, and EGS are integrated;
- recover from tornado damage at Michoud Assembly Facility suffered last February;
- resolve first time production issues for SLS elements; and
- adjust activities in response to unpredictable appropriations funding

Independent analyses by GAO and NASA's Office of Inspector General have also identified concerns with NASA's ability to meet projected launch dates. For instance, in an April 2017 report, GAO found that despite SLS, Orion, and EGS activities making progress, "*schedule pressure is escalating as technical challenges continue to cause schedule delays*". GAO characterized NASA's planned launch date of November 2018 as "precarious".

I hope that today's hearing will provide us with a clear plan and an updated launch date for EM-1, as well as the opportunity to examine other important issues, including:

- The reasons for the latest delay in launching EM-1 and the basis for having confidence in NASA‘s plans moving forward;
- Indicators and milestones Congress should use for measuring progress being made both by the SLS, Orion, and EGS programs and by NASA in establishing a production capability; and
- How a return to the Moon, including establishing a human presence, would impact the goal of sending humans to Mars in the 2030s, as directed in the 2017 NASA Transition Authorization Act.

In closing Mr. Chairman, I have frequently shared how the Apollo Program and President Kennedy’s vision for space inspired me to become a medical doctor. The systems under development that we are discussing today are an investment. They are an investment in our continued leadership in space exploration, in our ability to one day send humans to Mars, and in the dreams of the next generations of Americans to be part of that journey.

One of the inspirational figures of the Nation’s human space program is with us today. Dr. Magnus has flown on the Shuttle and lived on the International Space Station. We thank her for her service and appreciate her being a role model for millions of young people. I look forward to today’s testimony and I yield back.