



Maryland Space Business Roundtable

# General Lester L. Lyles

MSBR Luncheon

July 16, 2025

# National Air and Space Museum



# National Air and Space Museum

- I serve as a Board member of the Smithsonian's National Air and Space Museum.
- As you may know, the Museum is currently undergoing an ambitious multi-year project to reinvent the visitor experience within and beyond their walls.
- Museum construction and gallery openings are being completed in phases. The first set of new galleries on the building's west end opened to the public in October 2022 with the next phase of gallery openings scheduled for July 28, 2025. The project will be completed by July 1, 2026 for the building's 50th anniversary and America's 250th.
- This photograph showcases the new "front door" of the Museum, which will open in just a couple of weeks.
- I wanted to take this opportunity to share more information on a few of the space galleries that are part of the reimagined museum with the hope that you will both visit and find ways to get involved.



# Boeing Milestones of Flight

- Opening on July 28, Boeing Milestones of Flight tells the stories of how aviation and spaceflight have transformed the world. Situated at the entrance to the Museum, the gallery displays some of the most iconic objects in the Museum's collection, including the Bell X-1, John Glenn's Mercury capsule, and the Lunar Module LM-2.
- The gallery, which was reimagined in 2016, will be refreshed with a new exhibit design, new technology, and new stories of the people behind the artifacts.

# Boeing Milestones of Flight



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Artifacts In Action

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**NOVEMBER 16, 2021**

Caribbean mother-daughter duo to make history on Virgin Galactic spaceflight

Rebekah Schuchoff and her 10-year-old daughter, Amaniya, became the first mother-daughter duo in space after winning two tickets for the flight.

Photo © 2021 Jordan Green 4040

# Futures in Space

- OpFutures in Space will explore the potential near- and long-term futures that may emerge with advances in technology and enterprise. The gallery will feature developing technologies that bring down the cost of space, aim to inaugurate the era of commercial and tourist spaceflight, expand robotic planetary exploration and resource extraction, and keep humans alive in new environments. Futures in Space will also explore the as-yet unanswered social, political, and economic questions that emerge along with these new activities: Who decides who goes to space? Why do we go? And what will we do when we get there?
- One of the gallery's core narratives is the commercial space industry's role in defining the future. The relationship between government and commercial space agencies brings new opportunities for commercial activity in space as competition drives innovation forward and brings costs down. Complementary narratives on individual innovators and cultural imaginings of spaceflight will also be explored. Key artifacts in the gallery will include a Blue Origin commercial crew capsule, flight suits from Cosmonaut Yuri Gagarin and Citizen Astronaut Katya Echazarreta, examples of robotics used in space, and rocket engines from Rocket Lab, SpaceX, and Virgin Galactic.

# Futures in Space



At Home in Space

- Opening on July 1, 2026, At Home in Space will be an immersive, highly interactive exhibition that places visitors “in orbit” in the shuttle and space station era to explore recent human spaceflight and future possibilities. The gallery will detail the various and complex methods of reaching low-Earth orbit and establishing a permanent home in space, as well as how the scientific experimentation that takes place on the International Space Station drives innovation on Earth and in space.
- The exhibition will feature a variety of interactive elements, including a largescale model of the ISS Destiny Module through which visitors can walk and explore the scientific equipment used by astronauts. Major artifacts include an International Space Station model and a Space Shuttle main engine. Flight suits worn by astronauts Sally Ride and Guion Bluford will help tell their pioneering stories, and central media displays will feature dramatic images of Earth from the perspective of the ISS WORF or Cupola windows and powerful launch videos, including a Space Shuttle Discovery launch.

# At Home in Space



Caution! Clearance 6 feet (1.8 meters)

RTX  
LIVING IN THE SPACE AGE 114

RTX Living in the Space Age

Thank You

Space-age technologies  
create new opportunities,  
risks, and challenges.

We experience  
the Space Age in

- Some of the Museum's largest and most awe-inspiring artifacts are featured in *RTX Living in the Space Age*. Situated in one of the three grand galleries overlooking the National Mall, the exhibition will provide insight into space hardware and infrastructure that are largely invisible to the public but have a profound impact on our daily lives. Featuring topics from the beginning of the Space Age in the mid-20th century to the present and beyond, the gallery will narrate these stories through the display of iconic objects and the people who build, maintain, and use them.
- Featured sections of the gallery will include the development of large-scale rocket technology during and after World War II; ballistic missiles that resulted from Cold War development; vehicles that allowed launching of satellites and astronauts into space; and space systems for Earth observation, communications and navigation. Interactive elements will invite visitors to explore images taken by Hubble and the interior of Skylab and consider how satellites support the essential tasks in their daily lives. This hall will open on July 1, 2026.

## RTX Living in the Space Age



and Module Columbia

1969

1969

1969

1969

"I knew I was alone  
in a way that no  
Earthling has ever  
been before."  
+  
Michael Collins  
Astronaut



Michael Collins  
The Lonely Man



Michael Collins  
The Lonely Man

Reaction Control Thrusters

Small engines around Columbia allowed the crew to  
maneuver in space and during landing. These thrusters  
used two propellants: hydrazine as fuel and nitrogen tetroxide  
as oxidizer, which increased safety and efficiency.

Alt. Component

The Alt. Component was used to  
maneuver the LM in space and  
during landing. It was a small  
engine that used hydrazine as  
fuel and nitrogen tetroxide as  
oxidizer.



# Destination Moon

- I did want to also highlight one of the space galleries that is currently open to the public: Destination Moon.
- On July 20, 1969, the entire world came together to bear witness as Neil Armstrong took a single small step and made real the ancient human dream of setting foot on the Moon. That one unforgettable moment was the culmination of centuries of scientific progress and one nation's determination.
- The Destination Moon Gallery celebrates the iconic achievements of the Mercury, Gemini, and Apollo programs and seeks to inspire future generations of innovators and explorers. The gallery tells the story of humanity's fascination with the Moon from earliest times through the dawn of America's space program to the future of human spaceflight. Destination Moon not only highlights pioneering astronauts but also the more than 400,000 engineers, programmers, physicists, and others from across the country who made a Moon landing possible.

# Destination Moon