

Air and Space Museum celebrates 50 years with revamped galleries

By **Faith Simmons**

A half century after opening its doors, the Smithsonian's National Air and Space Museum in Washington, DC, unveiled five reimagined galleries on 1 July. "It became clear a decade ago that significant work was needed to bring this museum into the 21st century," director Christopher Browne said during a press tour. The institution has received roughly \$1 billion in public and private funding, and most of the renovations were ready in time for the country's semiquincentennial. The museum's eight-year-long revitalization of all 20 of its galleries will be complete when the last two displays open this fall.

Among the first things visitors see when they enter the building is a full-scale model of the *Hubble Space Telescope* in the *RTX Living in the Space Age Hall* exhibit, which features exhibits on rocket innovation, missile development, and the people who worked on space technology. Another gallery features artifacts that put aviation at the center of World War II and helped make the US a superpower. A third explores questions about the universe and includes a stack of hard drives containing black hole data from an Event Horizon Telescope site in Hawaii. Multimedia and in-

The *Jay I. Kislak World War II in the Air* gallery features a bronze statue of the Tuskegee Airmen, the first Black military aviators in the US. Above them hangs a North American P-51D Mustang, which had more victories than any other Allied fighter because of its speed and agility. (Photo by Daniel Sofié, Smithsonian's National Air and Space Museum.)



▲ The *RTX Living in the Space Age Hall* exhibit covers space technology and infrastructure from the mid 20th century to the present and the impact they have on daily life. The hall includes a model of the *Hubble Space Telescope* (**back right**), a training version of the Minuteman III missile (**center**), and the backup Skylab Orbital Workshop (**left**), the largest component of the US's first space station. (Photo by Mark Avino, Smithsonian's National Air and Space Museum.)





◀ **(Top)** Visitors to the museum can sit inside a model of the Cessna Skyhawk and manipulate airplane controls to move the ailerons, elevator, and rudder. Beneath the single-engine plane is a walk-in wind tunnel for guests to test the effect of lift and drag on different wing shapes. To the right is a buoyancy demonstration in which visitors fill a balloon with hot air and watch it rise. (Photo by Daniel Soñé, Smithsonian's National Air and Space Museum.)

(Middle) The U.S. National Science Foundation *Discovering Our Universe* gallery is organized by questions that include "What do we learn from starlight?" and "How did the telescope change astronomy?" Multimedia stations around the exhibit hall share how more-precise instruments have allowed researchers to better understand the universe. (Photo by Michael Persaud, Smithsonian's National Air and Space Museum.)



(Bottom) The *Flight and the Arts Center* explores the relationship between creativity and the experience of flying. Catherine Stewart's *Katherine Johnson Dress* is on display in the left case. (Photo by Michael Persaud, Smithsonian's National Air and Space Museum.)

teractive tools focus on the people who worked with the instruments on display. For instance, one presentation spotlights astronomer Vera Rubin and the image tube spectrograph she used to find evidence of dark matter.

The museum's most hands-on exhibition, which contains nearly 50 interactive stations, focuses on how aircraft and spacecraft fly. Visitors, for example, can sit in a full-scale Cessna Skyhawk, test wing shapes in a wind tunnel, or pilot a drone. The museum's art collection, which is in a renovated space, features works by more than 50 artists. Included are the Norman Rockwell painting *Man on the Moon (Portrait of an Astronaut)* and Catherine Stewart's *Katherine Johnson Dress*, a tribute to the NASA mathematician whose work was vital to early spaceflights. (To read more about Johnson, see the 2017 *PT* article "What it took to be a NASA computer.") The dress features embroidered equations from a paper on lunar orbit that Johnson coauthored.

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