

*Treasures  
of the  
Air and Space  
Museum*



*The Smithsonian Institution  
National Air and Space Museum*

AIR SPACE





**A** new downtown building (above) was opened on July 1, 1976. In the years since, the Museum has become one of the most popular in the world. More than 100 million people have walked through NASM's doors, and they continue to visit at an average rate of eight million people a year.

For many visitors, the artifacts in the Museum are memories made real. The sight of *Friendship 7* may evoke the excitement of the day when John Glenn orbited the Earth and put the United States back in the "space race." For some, the shining silver DC-3 in the Hall of Air Transportation is a reminder of the roar of its twin engines during a long-ago flight.

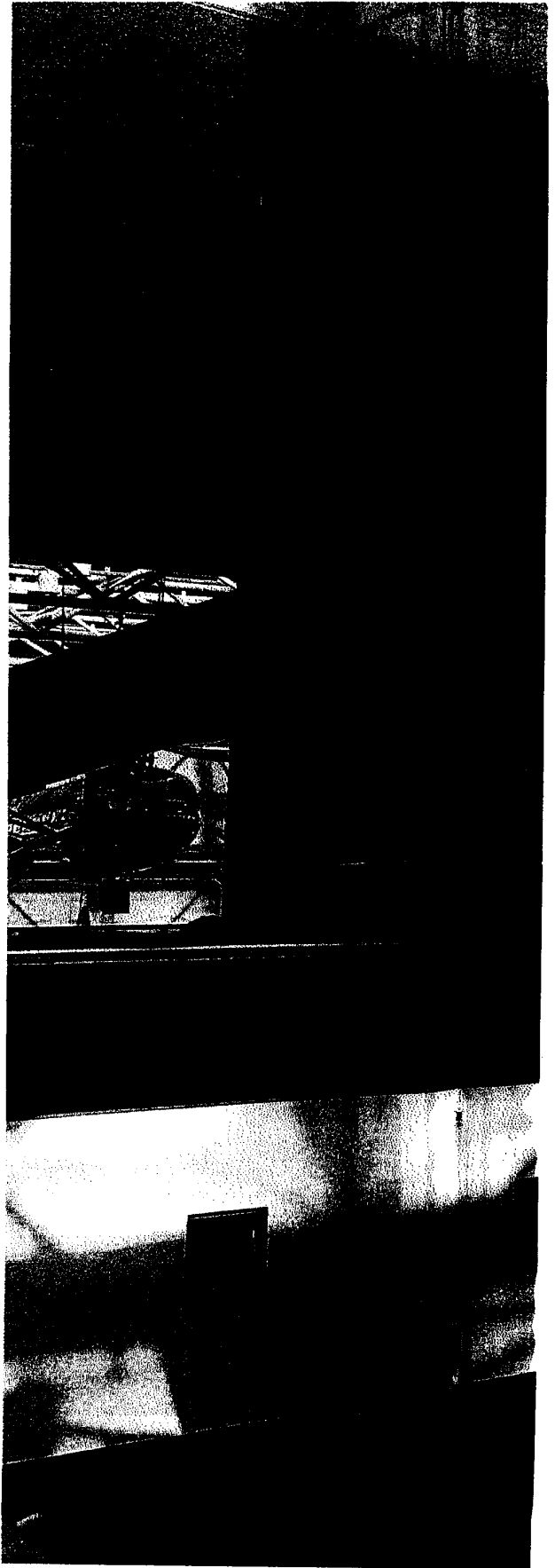


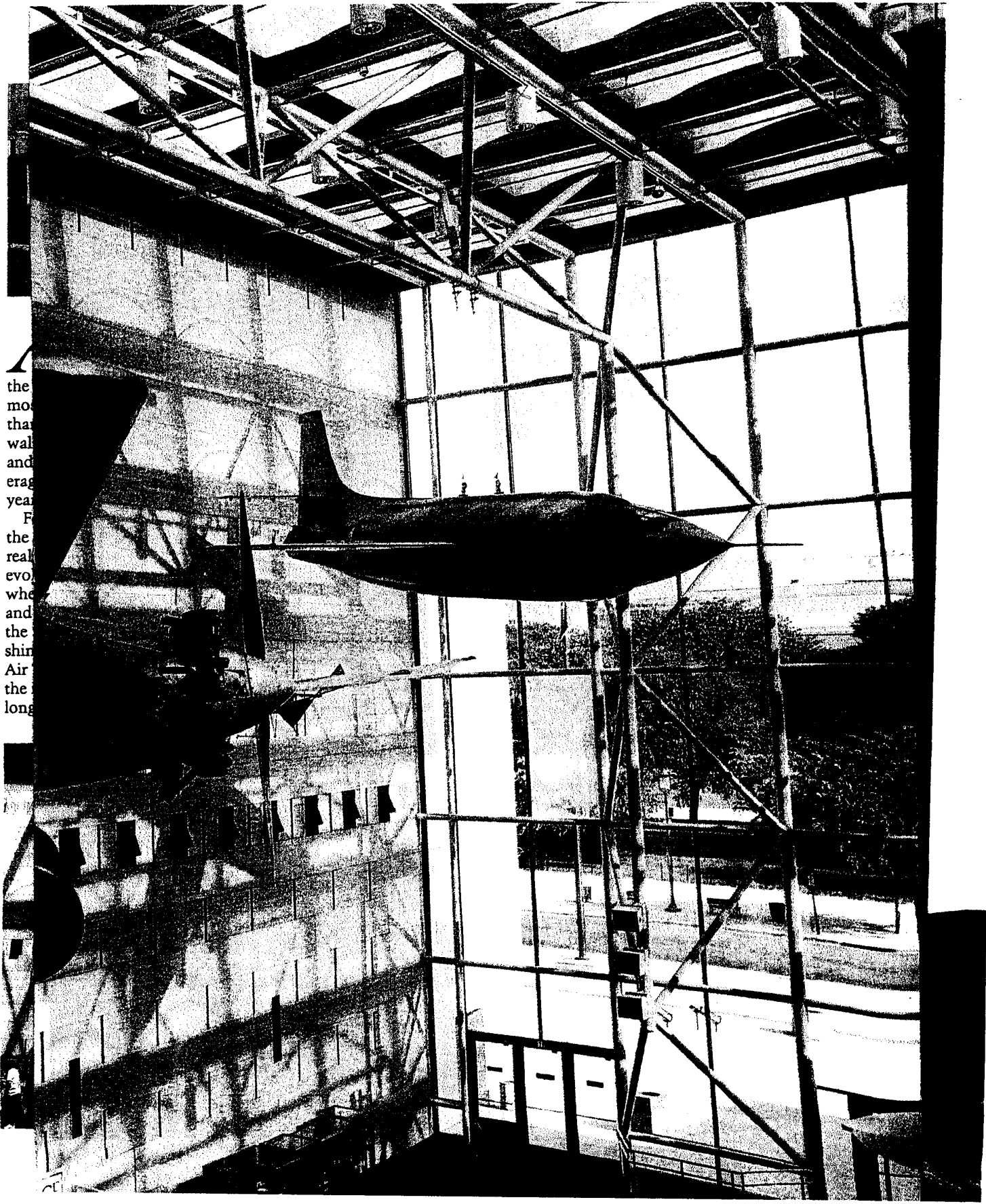
The artifacts in the Museum conjure up more than the movement of pistons and the roar of jets. They have stories to tell: stories of courage, ingenuity, and endurance, and sometimes stories of horror. They may reflect the slow, steady experimentation of the Wright brothers; the eccentricities of wealthy industrialist Howard Hughes, who was determined to build the world's fastest airplane—and did; the accomplishments of Wiley Post, the one-eyed pilot of the *Winnie Mae*; or the tragedy of a world plunged into war.

Advancements in aerospace have profoundly changed the world. Airplanes have revolutionized the way we travel; airplanes and missiles have changed the way we wage war and keep peace. Satellites have transformed communications and, through surveillance, perhaps help us prevent war. And after the boosters designed to hurl nuclear warheads at our enemies instead sent people into space, humankind has taken its first tentative steps off the planet. This perspective has given us new insight into our Earth and an increased awareness of the opportunities—and dangers—that we face in the future.

*The SPIRIT OF ST. LOUIS and the Bell X-1, two of the aircraft in the Milestones of Flight Hall, are renowned for breaking barriers (right). Charles Lindbergh used the SPIRIT in 1927 to make the first nonstop flight between New York and Paris (also the first solo nonstop flight across the Atlantic). Twenty years later, Chuck Yeager broke the sound barrier in the X-1.*

*Marking a milestone of another kind, the Soviet SS-20 and U.S. Pershing II missiles (left) symbolize the destruction of an entire class of nuclear weapons, the result of the Intermediate-range Nuclear Forces (INF) treaty.*





the  
mos  
tha  
wall  
and  
erag  
year  
F  
the  
real  
evo  
whe  
and  
the  
shir  
Air  
the  
long

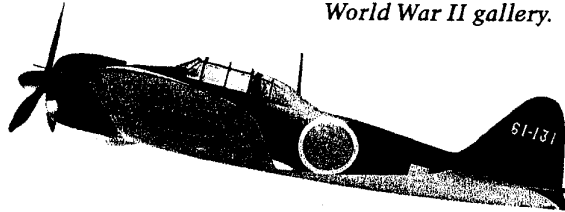
**I**n 1911 an Italian pilot in Northern Africa dropped hand grenades from his Blériot XI onto Turkish troops. In the process he became the first aviator to turn his airplane into a weapon. The airplane's role as an instrument of war grew dramatically during World War I, with airplanes being used first for reconnaissance, then as fighters, and finally as strategic bombers. By World War II the airplane had become a weapon with unprecedented destructive capability.

Two of the Museum's future exhibits will revolve around controversies about the airplane's use as a weapon. Following a complete redesign, a new World War I gallery will examine the airplane's deadly evolution during what was optimistically called "The War to End All Wars." (One of the aircraft on display will be a German Albatros D.Va—below—one of only two remaining in the world. It was in an Albatros that Manfred von Richthofen, better known as the Red Baron, scored most of his victories.)

The *Enola Gay* (right), the B-29 Superfortress that dropped the atomic bomb on Hiroshima, is now being restored at the Garber Facility. When the work is completed, the airplane will be displayed at the future Museum Extension at Washington-Dulles International Airport. There it will be the centerpiece of an exhibit examining the controversial issue of strategic bombing.

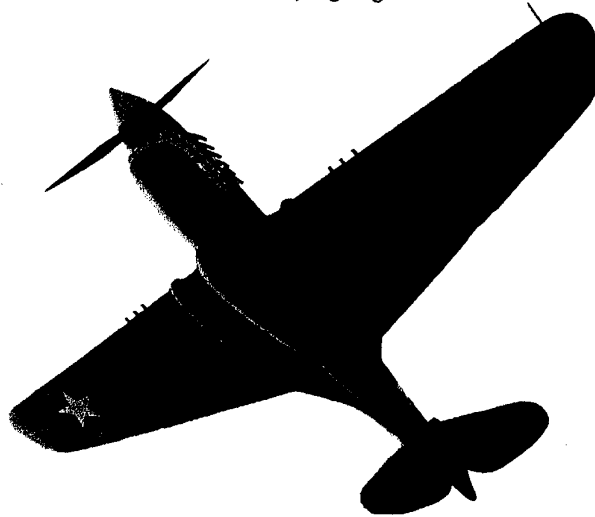
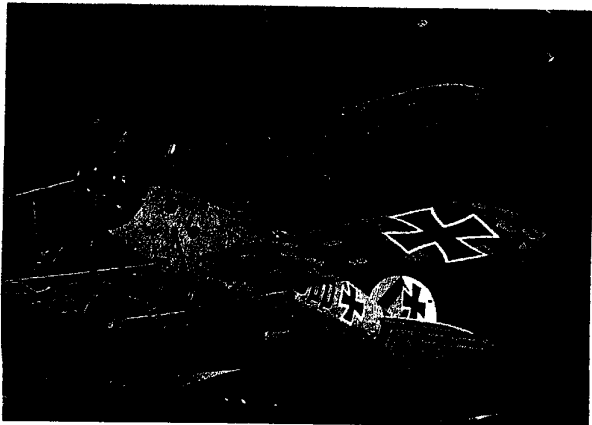
*When the Japanese Zero first flashed across the sky in the late 1930s, it seemed*

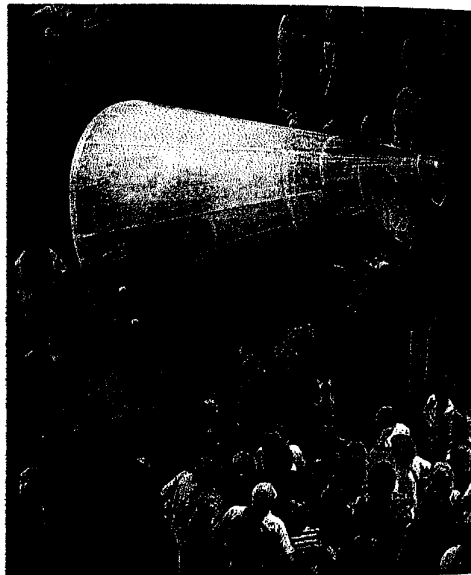
*unbeatable. Throughout World War II the Zero was Japan's front-line fighter, even though it was obsolete by war's end. The Museum's Zero is in the World War II gallery.*



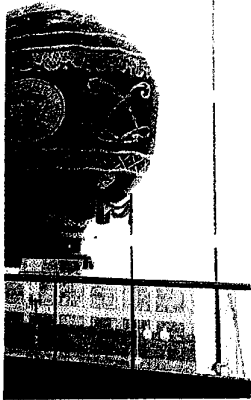
*Outside the entrance to the World War II gallery hangs a shark-faced Curtiss P-40 Warhawk (below). The P-40*

*achieved its greatest fame as the airplane flown by the American Volunteer Group—the Flying Tigers.*



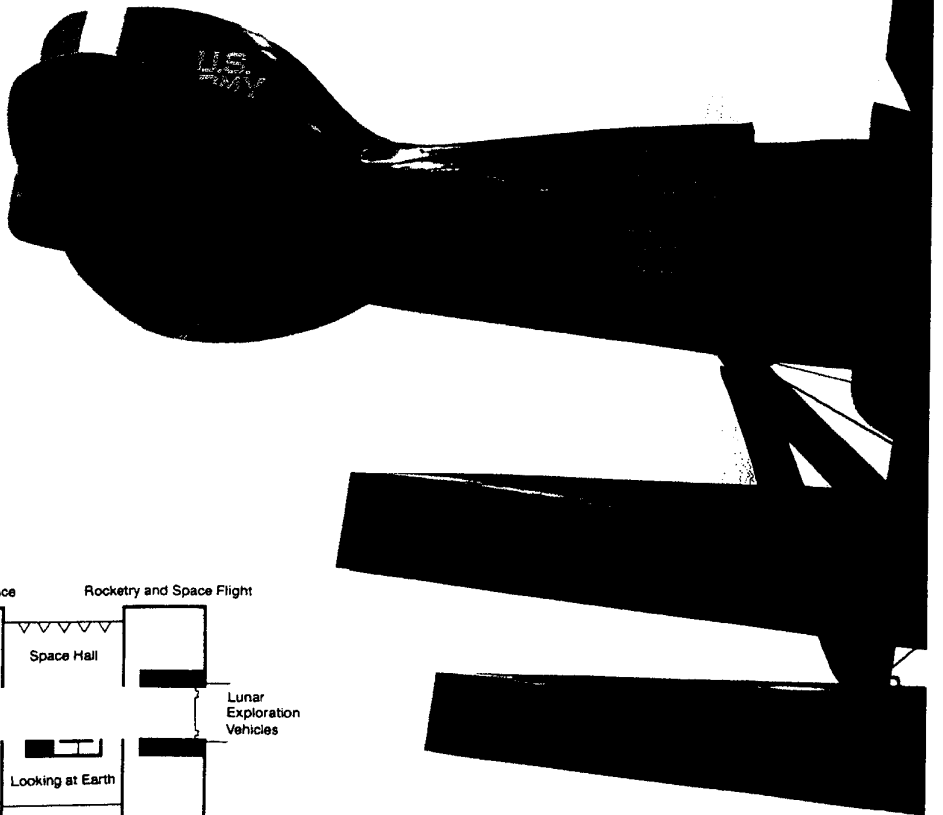
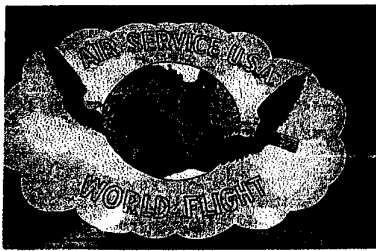


*When Apollo 11 thundered aloft from Florida on July 16, 1969, carrying Neil Armstrong, Buzz Aldrin, and Michael Collins, the Saturn V rocket stood 363 feet tall. When the Apollo returned to Earth, after Armstrong and Aldrin had walked on the moon, all that remained of the rocket was the capsule COLUMBIA (above). The helicopters in the Vertical Flight gallery represent a number of technical breakthroughs, from Igor Sikorsky's pioneering XR-4 to the Bell 206L-1 named SPIRIT OF TEXAS, the first helicopter to fly around the world (left).*

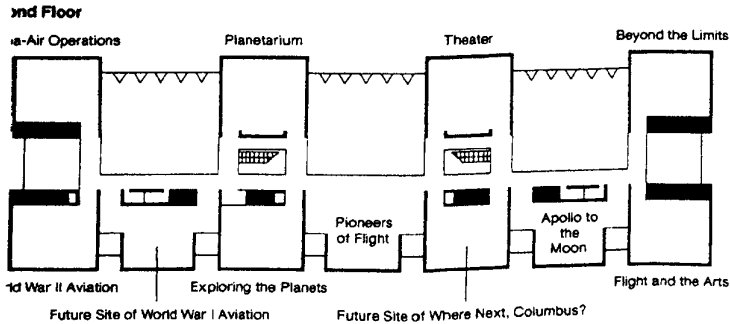
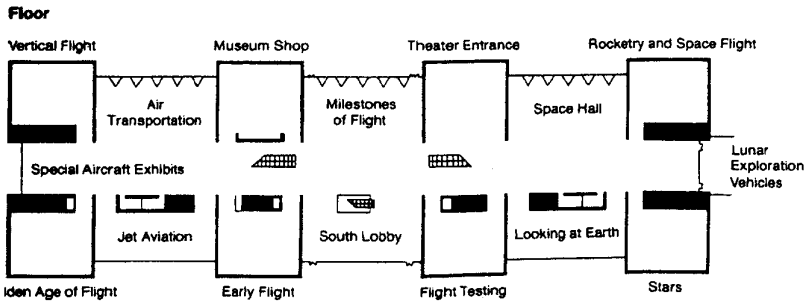


Few stop to realize it, but humans were flying 120 years before the Wright brothers' success at Kitty Hawk. In 1783 another pair of brothers, the Montgolfiers, built a balloon in which Jean-François Pilâtre de Rozier and the Marquis

d'Arlandes became the first humans to venture into the air. A large model of the balloon (just behind the red and white model of one flown by J.A.C. Charles the same year) will soon be moved to the Milestones of Flight Hall.



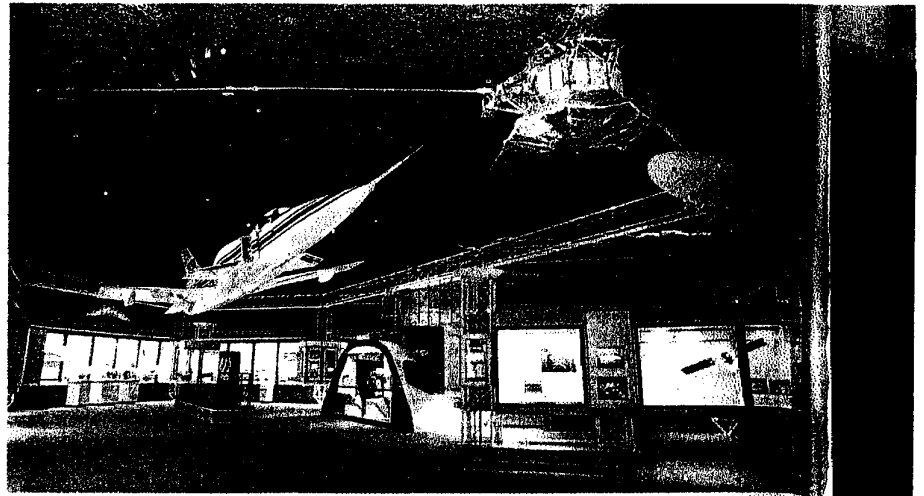
1924 four Douglas World users started on the first end-the-world flight. Two shed; the CHICAGO is in the neers of Flight gallery tail above).



Originally housed on the Mall in a "temporary" building that had been constructed to test Liberty airplane engines during World War I, the National Air and Space Museum moved to its current location in 1976. Its 23 galleries include everything from early aircraft to modern space vehicles.

The Apollo of 1975 was international in space. The androgynous the U.S. Apollo Soyuz vehicle resulting "space" shuttle superpower.

Once upon a time, aircraft could be designed by the TLAR (That Looks About Right) method. Today supercomputers have replaced slide rules, as the new computer gallery, *Beyond the Limits*, demonstrates (right). Some modern aircraft, like the forward-swept-wing X-29 (a mockup of which is suspended in the rear of the gallery), would not be able to fly without computer control.



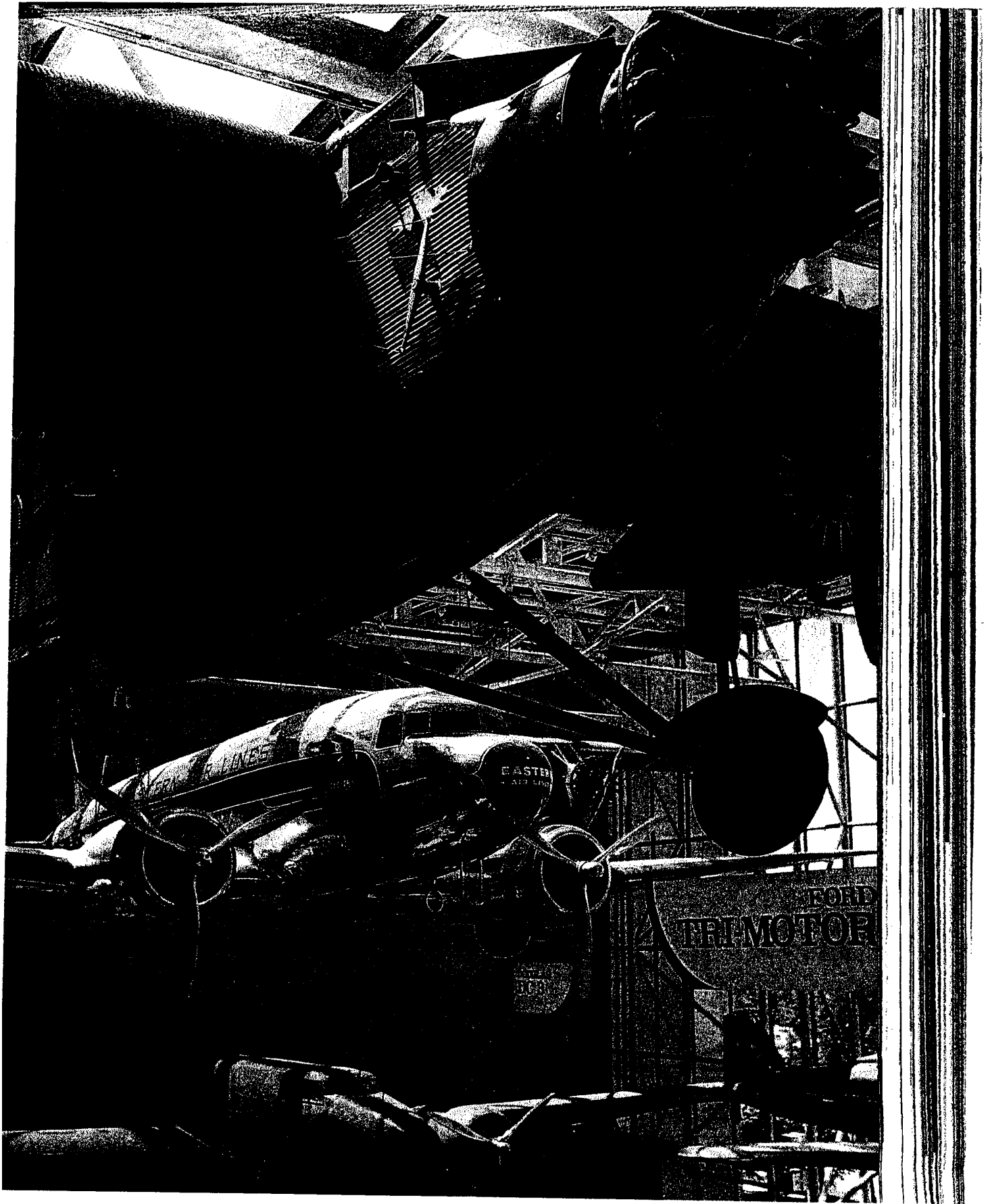
**B**ut most people become familiar with aerospace technology through peace, not war. Peaceful aviation flourished between the world wars, a time known as the Golden Age of Flight. During the Golden Age, remembered in its own gallery (above), the technology advanced by leaps and bounds and captured popular imagination. The gallery's centerpiece is Howard Hughes' H-1 racer, once the world's fastest airplane.

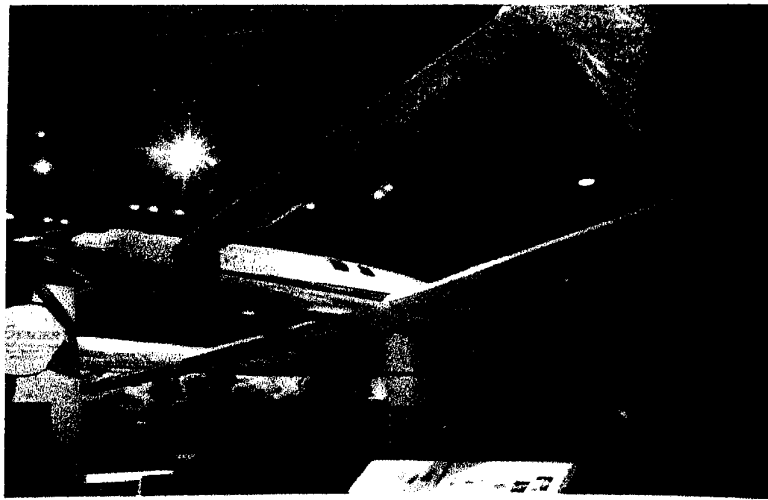
The golden airplane of commercial aviation, the Douglas DC-3 (opposite page, center), is suspended in the Hall of Air Transportation. One casualty of the DC-3's success was the Boeing 247 (an example hangs below the Douglas). Introduced in 1933, it was soon rendered obsolete by the DC-3. In the foreground is another legendary transport, the Ford Tri-Motor.

The business plane was another development from the Golden Age. Flight-ready visitors to the Museum study an example, the Grumman Goose on display in the Hall of Air Transportation (right).

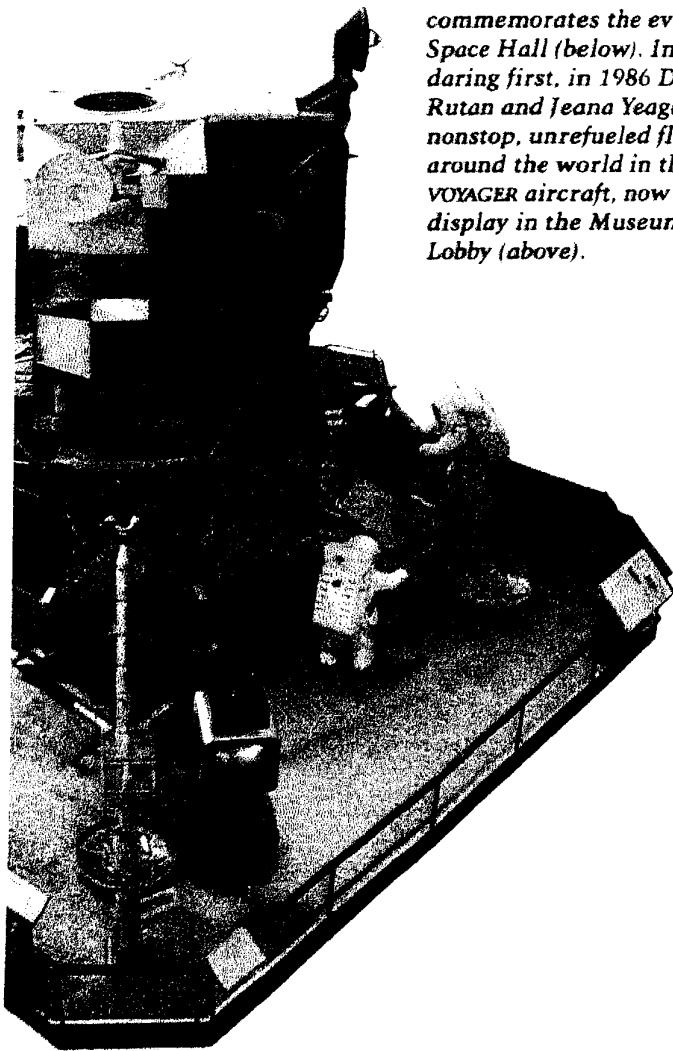


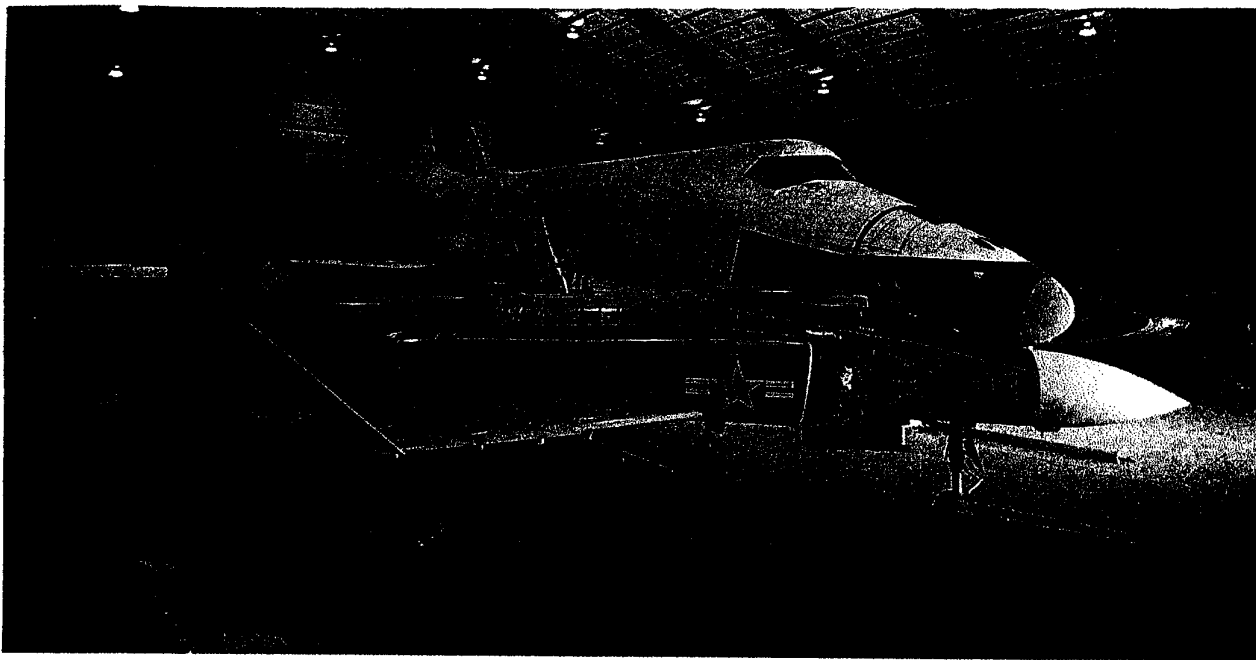




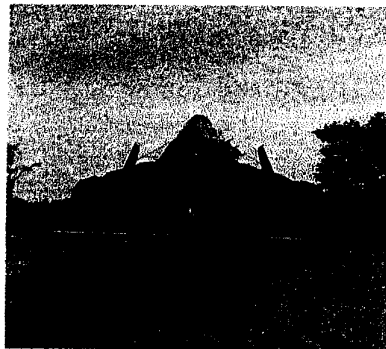


*July 20, 1969, Neil Armstrong and Buzz Aldrin walked on the moon. The Museum's lunar module, an operational test model that was never used, commemorates the event in Space Hall (below). In another daring first, in 1986 Dick Rutan and Jeana Yeager flew a nonstop, unrefueled flight around the world in the VOYAGER aircraft, now on display in the Museum's South Lobby (above).*





**T**he aircraft and spacecraft on display at the Mall represent only a fraction of the Museum's total collection. Many more are in storage at the Garber Facility, and others are mothballed at Davis-Monthan Air Force Base in Arizona. There's also a growing collection in storage at Washington-Dulles International Airport in suburban Virginia, including a Lockheed Constellation (bottom) and an SR-71 Blackbird



(middle). Future additions will include a Concorde and a Boeing 747—not exactly items you can stick away in a closet.

To find space for this growing collection, the Museum plans to construct an Extension at Dulles. Following Congressional authorization, the Smithsonian will begin an extensive fundraising capital campaign, seeking the support of individuals, corporations, foundations, and associations to make the dream of the Extension a reality.

It will be a big task. The Extension will be much larger than the current building, with a "footprint" of 27 acres. It will house the artifacts presently at the Garber facility. The Museum's restoration work will also be done at Dulles, in an area that will allow visitors to observe the process.

Airplanes on display will include the *Enola Gay* and the space shuttle proof-of-concept vehicle *Enterprise*, currently stored in a hangar at Dulles (above, with an F-4 Phantom). If all goes according to plan, the Extension will open in 1995, allowing the National Air and Space Museum to deliver on its charter's mandate well into the next century.

