

*Donald D. Engen (right) can often be seen with his deputy director, Donald S. Lopez, walking the museum floor, where renewed attention to exhibit maintenance is apparent.*

# It's a New

Photo by Paul Kennedy



**A new director takes the museum back to its charter to collect, preserve, and display the nation's aerospace heritage.**

# Day at Air and Space

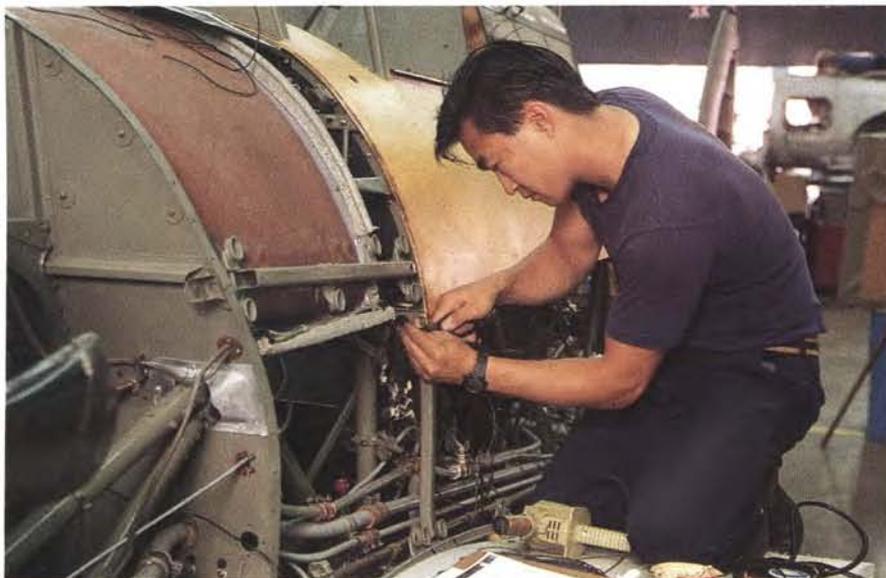
**By John T. Correll**, Editor in Chief

**T**HE MAIN thing to know about Donald D. Engen is that he is an airman. He has been flying actively for fifty-four years and has flown 265 or 270 different types of aircraft. He's lost track of the exact number. He served in the Navy from 1942 to 1978, progressing in rank from seaman second class to vice admiral. He was in three wars, beginning with World War II. He holds twenty-nine awards and decorations, including the Navy Cross. As a dive bomber pilot flying Curtiss Helldivers off the *Lexington* in 1944, he helped sink the Japanese carrier *Zuikaku*.

Later on, he was a Navy test pilot, deputy commander of Atlantic Command and the Atlantic Fleet, and, in the 1980s, head of the Federal Aviation Administration. He is seventy-two but not yet ground-bound. "I have a glider today that I keep in Nevada, and I kind of commute to it," he says.

Since last summer, Admiral Engen has been director of the National Air and Space Museum in Washington, D. C. He carefully avoids comment on his predecessor [see "*The Revelations of Martin Harwit*," p. 38], who left amid controversy in 1995 and under whom the museum strayed from its prime charter to collect, preserve, and display historic airplanes and aerospace artifacts. Nevertheless, as Admiral Engen declared when he was appointed, it's a "new day" at Air and Space, marked by an emphatic return to the museum's traditional mission.

Admiral Engen's first act as director was to reappoint Donald S. Lopez—World War II fighter ace, retired Air Force lieutenant colonel, and arguably the best liked and one of the most respected persons on the museum staff—as deputy director, a position he had held from 1983 to 1990. He also continues to fly when he can,



Admiral Engen says that he and Colonel Lopez agreed that the Garber restoration facility should “resume its eminent place in our hierarchy.” Here, technician Will Lee works to restore a Hawker Hurricane.

mostly a Cessna 172 but “now and then” a Stearman.

The two of them are seen frequently walking the museum floor, where fresh paint and more attention to exhibit maintenance are apparent. Restoration work and care of the museum’s 344 vintage aircraft are now a priority, beginning to correct a situation reported by the General Accounting Office in 1995 in which the collections staff felt “disenfranchised,” partly because of “little or no interest shown by the museum management in restoration.” GAO noted that only about four percent of the total museum staff was engaged in restoration, compared to twenty-two percent so engaged at the US Air Force Museum in Dayton, Ohio.

### Astrophysics Lab Closes

Some of the changes taking place on Admiral Engen’s watch come from having steered a budget cut into the most positive direction possible. Congress reduced its funding allocation to the Smithsonian Institution, of which the Air and Space Museum is a part. Air and Space took its proportional share of the reduction.

Budgets for the museum’s exhibits, the aeronautics department, and space history were not affected, but the astrophysics lab—founded by former director Martin O. Harwit—has been abolished. (Among the findings of a 1995 report by the National Academy of Public Administration were that

“the astrophysics laboratory’s contributions to the museum’s mission do not justify its presence” and that “the single most important reason the lab is located at the museum is that the former director was an astrophysicist and expressed strong interest in the lab’s research and its ability to sustain his work as a scientist.”)

One element of the museum, the Garber Preservation, Restoration, and Storage facility in Suitland, Md., will actually gain funding and staff. “When Don [Lopez] and I came here, we both agreed that we need to send a signal that we want the Garber facility to resume its eminent place in our hierarchy,” Admiral Engen says.

The entire museum reverberates with the enthusiasm of the staff and of the two veteran aviators in the front office. Showing off work in progress in October, Don Lopez pointed to preparations to bring in an F-86 Sabre as the centerpiece of an exhibit on airpower in the Korean War. That is the first of several exhibits and displays keyed to the fiftieth anniversary of the US Air Force, coming up in 1997. “We’re going big on the fiftieth,” Admiral Engen says.

The F-86 will occupy the open center space at the west end of the museum. Suspended above it at eye level from the second floor walkway is a shark-toothed P-40 fighter with “Lope’s Hope” lettered on the nose. “Lope” is Don Lopez, who started

out flying P-40s in China against the Japanese. “The P-40’s giving the Sabre top cover,” he observes.

(Actually, he also has considerable personal regard for the F-86, which he flew in combat in the Korean War. That opinion is shared by Admiral Engen, who rates the FJ-3M—the Navy designation for the F-86H—as one of the two airplanes he most enjoyed flying. The other was the F8U3, an advanced model of the Vought Crusader with a bigger engine that he flew as a Patuxent River test pilot in 1959.)

### 1.8 Million See *Enola Gay*

Next door to the Sabre is the most famous and most popular special exhibition in the history of the National Air and Space Museum. It houses the forward fuselage of the *Enola Gay*, the B-29 bomber that dropped the first atomic bomb on Japan in 1945. It was a plan to use the *Enola Gay* in a politically rigged show about the horrors of nuclear war that brought the museum’s previous regime tumbling down.

As of mid-October, the *Enola Gay* exhibition had drawn 1.8 million visitors, approximately double the number for the previous attendance champion, a “Star Trek” program that logged 880,000 visitors in 1992.

Among the notable new programs at the museum is “How Things Fly,” which opened in September with more than fifty touch-and-participate exhibits explaining such things as how a heavy airliner gets aloft and stays there. Interactive displays include a visitor-operated wind tunnel that demonstrates lift, drag, and the aerodynamic effects on airfoils. Visitors can climb into a Cessna 150 and watch the rudder, ailerons, and elevator move as they manipulate the controls. A General Electric cutaway shows the internal workings of a turbojet engine. The idea, the museum says, is to help dispel some of the mystery of flight while preserving the magic of it.

Also new is “Cosmic Voyage,” an IMAX film that premiered on the five-story screen of the museum’s Langley Theater August 9. It combines computer animation with live-action footage for a white-knuckle guided tour through time and space. Viewers are there for the “Big Bang” birth of the cosmos. They watch as a comet fireball races toward primor-

dial Earth. They ride the "cosmic zoom" through superclusters of galaxies, then plunge down in scale to explore the subnuclear world of quarks.

The filmmakers held themselves to rigorous scientific accuracy. For example, it took more than 950 hours of time on a Cray C-90 supercomputer to calculate the precise positions of stars and gases and simulate the colliding galaxies portion of "Cosmic Voyage." After its opening run at the National Air and Space Museum, the film will be available for showing in specially designed IMAX theaters elsewhere.

### The Dulles Center

As administrator of the Federal Aviation Administration in June 1985, Donald D. Engen signed an agreement giving to the National Air and Space Museum for one dollar a year enough land for an "annex" at Dulles Airport (which was owned by the FAA in those days) in suburban Virginia, west of Washington. Little did he imagine that the project would not really begin to move ahead until eleven years later and that it would fall to him to raise the \$200 million required for its completion.

The "annex" tag is long gone. Now it's "the Smithsonian Institution National Air and Space Museum Dulles Center." The main display hangar will be a massive facility with a clear dome under which visitors can walk up to such large treasures from the



Photo by Paul Kennedy

**The fully restored Enola Gay's home will be the National Air and Space Museum Dulles Center (shown here in scale model) in Virginia. Admiral Engen's goal is to have the new \$200 million center open by December 31, 2001.**

museum's collection as the space shuttle *Enterprise*, the Concorde, a B-17 bomber, and the SR-71 "Blackbird" reconnaissance aircraft. In the middle of it all, says Admiral Engen, will be "the fully restored, World War II B-29 bomber that hastened the end of a terrible war, the *Enola Gay*."

For the first time, Air and Space will have not only the floor space but also the big doors, high ceilings, and reinforced floors to allow exhibition of aircraft and spacecraft too large to show in the main museum on the National Mall. Also on display at Dulles will be many of the 32,000

artifacts in the collection, less than ten percent of which can be displayed at any one time at the museum downtown. In addition to the exhibit areas at Dulles, there will be a large-format theater, classrooms, and a facility simulating a control tower where visitors can see and hear airplanes landing and departing from the airport. The archival collection and the restoration and storage operation will also move to Dulles from the dilapidated Garber facilities in Maryland.

Congress has authorized \$8 million for planning and design of the Dulles Center but has made it clear that there will be no federal funds for construction. Roads, interchanges, a taxiway, and infrastructure support will be contributed by the state of Virginia. The rest of the money must come from a public fund-raising campaign.

Admiral Engen says the Dulles Center is his top priority. "My goal is to have the facility open and be able to walk through the doors on December 31, 2001," he says.

Challenging as it sounds, don't imagine that this is all that Admiral Engen is doing. In September, Secretary of Defense William J. Perry appointed him to conduct an independent review of the Department of Defense executive support air fleet. That he was chosen for the task and that he took it on in stride are further indications of the caliber of the man now setting the course at the National Air and Space Museum. ■



Photo by Paul Kennedy

**The Dulles Center will house many of the museum's 32,000 artifacts, only a tenth of which can be displayed at one time at the main museum. It will also house a large-format theater and the restoration and storage operations.**