

# The Aero Club of Northern California

The 2005 "Crystal Eagle" Award Winner

**EILEEN MARIE COLLINS**



# STS-114 RETURN TO FLIGHT



*STS-114 astronauts Steve Robinson, Jim Kelly, Andy Thomas, Wendy Lawrence, Charles Camarada, Eileen Collins and Soichi Noguchi.*

Finally, on July 26, 2005 at 10:39 a.m. EDT, Discovery's twin white Solid Rocket Boosters thundered to life and one of the most complicated and closely watched missions in history was on its way. George Diller, launch commentator exclaimed "Liftoff of Space Shuttle Discovery; beginning America's new journey to the Moon, Mars and beyond".

The first of two Return to Flight missions, STS-114 included breathtaking in-orbit maneuvers, tests of new equipment and procedures, a first-of-its kind spacewalking repair, and phone calls from two world leaders.

Using the new Orbiter Boom Sensor System, a close-up view of the orbiter's thermal protection system was possible. Commander Collins guided Discovery through the first-ever "rendezvous pitch maneuver" as the orbiter approached the International Space Station for docking. The slow-motion

back flip also allowed Station crewmembers to snap photos to ensure that Discovery was in good shape to come home.

During the mission, three spacewalks were undertaken. When two thermal protection tile gap-fillers were spotted jutting out of Discovery's underside, a plan was devised to ensure that the protrusions would not cause higher-than-normal temperatures during atmospheric reentry. This was the first ever on-orbit repair of the Shuttle heat shield.

The crew received phone calls from President George W. Bush and Japanese Prime Minister Junichiro Koizumi, who

offered congratulations and appreciation for their hard work.

Discovery carried more than 12,000 pounds of equipment and supplies for the International Space Station and carried about 7,000 pounds of Station material back to Earth. After nine days, Discovery undocked from the Station and started the return to Earth.

An extra day in orbit was necessary because of the weather at Kennedy Space Center. A successful landing was then made at Edwards Air Force Base in the high desert of California. Discovery touched down at 5:12 a.m. PDT on August 9, 2005.

# EILEEN MARIE COLLINS

## (COLONEL, USAF, RET.)

### FROM "SOARING CAPITAL OF AMERICA" TO THE SPACE SHUTTLE

Eileen Collins was born November 19, 1956, in Elmira, New York, dubbed as the 'soaring capital of America' because of its sailplane activities. She graduated from Elmira Free Academy in 1974 and received an associate in science degree in mathematics/science from Corning Community College in 1976; a bachelor of arts degree in mathematics and economics from Syracuse University in 1978; a master of science degree in operations research from Stanford University in 1986; and a masters of arts degree in space systems management from Webster University in 1989.

Collins graduated in 1979 from Air Force Undergraduate Pilot Training at Vance AFB, Oklahoma, where she was a T-38 instructor pilot until 1982. From 1983 to 1985, she was a C-141 aircraft commander and instructor pilot at Travis AFB, California. She spent the following year as a student with the Air Force Institute of Technology. From 1986 to 1989, she was assigned to the U.S. Air Force Academy in Colorado, where she was an assistant professor in mathematics and a T-41 instructor pilot. She was selected for the astronaut program while attending the Air Force Test Pilot School at Edwards AFB, California from which she graduated in 1990.

She has logged over 6,751 hours in 30 different types of aircraft. Colonel Collins retired from the Air Force in January, 2005.

Selected by NASA in January 1990, Collins became an astronaut in July 1991. Initially assigned to Orbiter engineering support, Collins also served on the astronaut support team responsible for Orbiter pre-launch checkout, final launch configuration, crew ingress/egress, landing/recovery, working in Mission

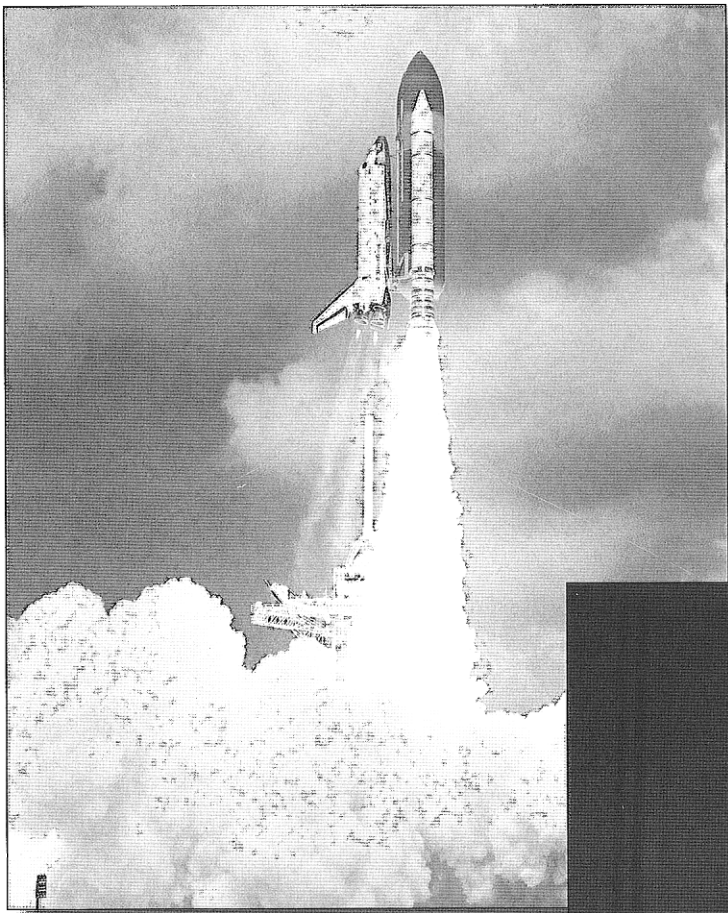


Control as a spacecraft communicator, as well as other positions with NASA. Collins served as pilot on STS-63 and STS-84, and was the commander on STS-93 and STS-114. A veteran of four space flights, she has logged over 872 hours in space.

Among her special honors, are the Defense Superior Service Medal, Distinguished Flying Cross, Defense Meritorious Service Medal, Air Force Meritorious Service Medal, Air Force Commendation Medal, Armed Forces Expeditionary Medal for service in Grenada, French Legion of Honor, NASA Outstanding Leadership Medal, and NASA Space Flight Medals.

She is a member of the Air Force Association, Order of Daedalians, Women Military Aviators, U.S. Space Foundation, the American Institute of Aeronautics and Astronautics, and the Ninety-Nines.

Eileen Collins is married, has two children and enjoys running, golf, hiking, camping, reading, photography and astronomy.



*A view shows Space Shuttle Discovery moments after liftoff from Launchpad 39B on historic Return to Flight mission.*

*STS-114 Commander Eileen Collins observes training activities of her crewmates from the simulation control.*



*A photo of Discovery taken from International Space Station during the Rendezvous pitch maneuver.*

The Aero Club of Northern California  
**Twenty-Third Annual Awards Presentation**  
 Hiller Aviation Institute  
 October 22, 2005

Welcome and Introduction .....	Rick Willson
<b>DINNER</b>	
Introduction of Aero Club Officers and Board Members .....	Rick Willson
Aero Club – National Aeronautic Association (NAA) Awards	
• Quentin Burden .....	Jerry Bennett
• Frank Mason .....	Carl Honaker
Aero Club Scholarship Awards .....	.Scott Yelich
<u>Robert L. Hamilton Scholarship</u> <u>Roy G. Hester Scholarship</u> <u>James M. Nissen Scholarship</u>	
• Alexander A. Carlozzi                      • Sarah J. Lemmer                      • Jason R. Larson	
Guest Speaker .....	Rick Willson
• Eileen Collins	
Crystal Eagle Award Presentation .....	.Rick Willson
• Eileen Collins	

## The Crystal Eagle Award

The Crystal Eagle Award is presented annually by the Aero Club of Northern California to recognize an individual whose accomplishments have significantly contributed to the advancement of aviation or space technology.

### The Crystal Eagle: A distinctive work of art

The Crystal Eagle Award is a unique work of art crystal handcrafted in Italy.

It is fitting that the eagle should be the symbol for the Aero Club's annual award. The North American eagle is recognized as a bird possessing great strength, natural grace, keenness of vision and power in flight. The eagle has historically been used by man to identify with flying.

The Crystal Eagle is mounted on a California redwood base, unique to Northern California. In its natural state redwood has unusual durability, commensurate with the recipients of this coveted award.

### Crystal Eagle Award Winners

- 1983: General James "Jimmy" Doolittle
- 1984: Brigadier General Charles E. "Chuck" Yeager
- 1985: Stanley Hiller, Jr.
- 1986: William "Bill" Lear, Sr.
- 1987: James M. "Jim" Nissen
- 1988: Anthony W. "Tony" LeVier
- 1989: Elbert "Burt" L. Rutan
- 1990: George S. Cooper
- 1991: Allen E. Paulson
- 1992: Jeana Yeager
- 1993: Robert T. Jones
- 1994: Frank L. Christensen
- 1995: James S. Ricklefs
- 1996: Darryl G. Greenamyre
- 1997: Robert L. "Hoot" Gibson
- 1998: Donald D. Engen
- 1999: Paul H. Poberezny
- 2000: Wayne Handley
- 2001: Igor I. Sikorsky
- 2002: A. Scott Crossfield
- 2003: Clay Lacy
- 2004: Elgin M. Long



## Our Special Thanks to:

ACM Aviation/Stanley Bac  
Aris Helicopter/Steve Sullivan  
Fry's Electronics/Randy Fry  
HP Aviation Department

Hiller Aviation Institute  
Hillis Printing/Chuck Hillis  
Mineta San Jose International Airport

Sixteenth Street Design/  
Bill & Kim Pfahnl  
San Jose Jet Center/Dan Ryan  
SJSU Student Chapter-AAAE

## About our club . . .

The Aero Club of Northern California was formed to promote those activities which advance aviation and aerospace within Northern California.

We are a chapter of our parent organization, the National Aeronautic Association (NAA), which having been founded in 1905 as the Aero Club of America is the oldest independent, non-profit aviation organization in the United States, and the sole U.S. representative to the Federation Aeronautique International (FAI).

So central to aviation was the Aero Club that until 1926 it issued all pilot licenses in the United States.

The first five pilot licenses issued by the Aero Club were: 1) Glen H. Curtiss, 2) Lt. Frank P. Lahm, 3) Louis Paulham, 4) Orville Wright, and 5) Wilbur Wright. All other pilot licenses issued in the United States subsequent to these five were until 1926 issued by the Aero Club of America.

We embrace the goals of our parent organization in our efforts to support a vigorous aviation and space program for students at all levels of learning, and to recognize and honor those who have made outstanding contributions to the advancement of aviation and space flight.

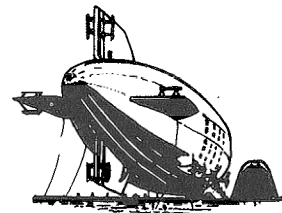
## About our logo . . .

Incorporated in the logo of The Aero Club of Northern California are some of the most significant contributions the Northern California area has made to the art and science of flight.



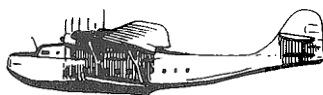
*Montgomery Flight - 1904*

Often referred to as "The Father of Basic Flying" Dr. John Montgomery was a true aviation pioneer. San Jose was the site of many of his historic achievements. Alexander Graham Bell noted that, "All subsequent attempts in aviation must begin with the Montgomery Machine."



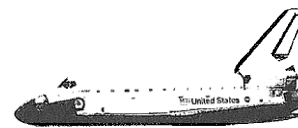
*Moffett Field - 1933*

Dedicated April 12, 1933, Moffett Field until recently was the United States guardian of the Pacific. It continues to be a major aviation facility supporting both federal and military operations.



*China Clipper - 1935*

Lifting from San Francisco Bay waters on November 22, 1935, the Clipper became the first airplane to fly the Pacific non-stop. Cutting over 15 days off the best surface time from San Francisco to Manila, it led to the elimination of the barriers of space and time.



*NASA Ames Research Center - 1939*

Northern California's continued contributions to involvement in the quest for our ultimate destiny is assured by the ongoing advancements in aerospace science and technology at NASA's Ames Research Center.