



National Aeronautics and Space Administration

Lyndon B. Johnson Space Center  
Houston, Texas 77058

## ***Biographical Data***

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### **F. ANDREW (DREW) GAFFNEY (M.D.) PAYLOAD SPECIALIST**

**PERSONAL DATA:** Born June 9, 1946, the oldest of five children, in Carlsbad, New Mexico. His father, F. Blair Gaffney, is deceased; his mother, Miriam Julia Gaffney, lives in Carlsbad. He is married to the former Elizabeth B. Sims of Berkeley, California. They have two daughters and a son and daughter, respectively. Dr. Gaffney enjoys sailing and traveling. His hobbies include bicycling, photography, scuba diving and reading.

**EDUCATION:** Graduated from Carlsbad, New Mexico High School in 1964; received a bachelor of arts degree in psychology, University of California, Berkeley, 1968 and a doctor of medicine degree, University of New Mexico, 1972. Internship and residency in internal medicine, Cleveland Metropolitan General Hospital, 1975, and a fellowship in cardiology, University of Texas, Southwestern Medical Center, 1977.

**ORGANIZATIONS:** American Heart Association, Council on Circulation; American College of Cardiology (fellow); Aerospace Medical Association; Dallas County Medical Society/Texas Medical Association; American Federation for Clinical Research; American Institute of Aeronautics and Astronautics; American Society of Echocardiography; Society of Air Force Flight Surgeons.

**PUBLICATIONS:** Dr. Gaffney has more than 100 publications in the areas of cardiovascular regulation, space physiology and patient safety.

**SPECIAL HONORS:** Inductee, International Space Hall of Fame, Alamogordo, NM, 1996; NASA Group Achievement Award, Spacelab Life Sciences-2 JSC Payload Project Team, 1994; Kilby Award for Technology Achievement, 1992; NASA Group Achievement Award, Spacelab Life Sciences-1 E-294 Experiment Team, 1991; Aviation Week and Space Technology, Aerospace Laurels Award, 1991; NASA Space Flight Medal, 1991; Distinguished Alumnus, University of New Mexico School of Medicine, 1989; Distinguished Graduate, USAF School of Aerospace Medicine, Primary Course, 1986; American Heart Association, International Scientist, 1983; Award for Outstanding Teaching and Clinical Service, Division of Cardiology, University of Texas, Southwestern Medical Center, Dallas, Texas, 1981; National Institutes of Health, Individual Post-Doctoral Research Fellowship, 1977; American Association of Medical Colleges Public Health Fellowship Award, 1970.

**EXPERIENCE:** Visiting scientist at August Krogh Institute, University of Copenhagen, Denmark, 1978 to 1979; assistant, associate and professor of medicine, University of Texas, Southwestern Medical Center, Dallas, Texas, 1979 to 1992. A colonel in the Texas Air National Guard, Dr. Gaffney served as a senior flight surgeon-astronaut for the 147th Fighter Interceptor Group at Ellington Air National Guard Base, Houston, Texas, 1986 to 1993 and as a reservist at Brooks Air Force Base, San Antonio, Texas, until his retirement from the USAF in 2007.

**NASA EXPERIENCE:** Dr. Gaffney served as a visiting senior scientist with the Life Sciences Division at NASA Headquarters from June 1986 to June 1989. He worked with the Operational Medicine group and was associate manager of Biomedical Research as well as program scientist for the D-2 Spacelab mission and the Research Animal Holding Facility. He was a member of several working groups and implementation teams planning collaborative



research with German, French and Soviet government scientists. He also served on a number of space station and advanced mission planning groups, including the “Humans to Mars” study group, which was charged with outlining the components and timetable for a series of flights to Mars.

Dr. Gaffney’s experience in cardiac research and experience in echocardiography and human physiology led to his being selected as a payload specialist astronaut on the June 1991 STS-40 Spacelab Life Sciences mission (SLS 1), the first shuttle mission dedicated to biomedical research. Dr. Gaffney was a co-investigator on experiments that studied human cardiovascular adaption to spaceflight and included the first invasive measurements of central venous blood pressure through a catheter placed in his heart several days prior to flight and removed after in-flight measurements were completed. The SLS-1 mission flew more than 3.2 million miles in 146 orbits and its crew completed over 18 experiments during a 9-day period, bringing back more peer-reviewed, published medical data than any previous NASA flight. The mission duration was 218 hours, 14 minutes and 20 seconds. Following this flight, Dr. Gaffney became a member of the Institute of Medicine’s Committee on Space Biology and Medicine, serving from 1992 to 2000. He is a professor of medicine (cardiovascular disease) at Vanderbilt University and continues to serve as a consultant and reviewer for human spaceflight-related studies.

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