Biographical Data

Lyndon B. Johnson Space Center
Houston, Texas 77058

National Aeronautics and Space Administration

STEPHEN K. ROBINSON (PH.D.)
NASA ASTRONAUT

PERSONAL DATA: Born October 26, 1955, in Sacramento, California. Enjoys flying, antique aircraft, kayaking, hiking, drawing, painting, and stereo photography. Plays lead guitar in Max Q, the all-astronaut rock-n-roll band; also plays stand-up bass, banjo, mandolin, pedal-steel guitar, and cello.

EDUCATION:
1973: Campolindo High School, Moraga, California
1978: University of California at Davis: dual Bachelor of Science in mechanical and aeronautical engineering
1985: Stanford University: Master of Science in mechanical engineering
1990: Stanford University: Doctorate in mechanical engineering, with a minor in aeronautics and astronautics

ORGANIZATIONS: Experimental Aircraft Association.

SPECIAL HONORS: NASA Ames Honor Award for Scientist (1989); American Institute of Aeronautics and Astronautics Outstanding Technical Paper Award for Applied Aerodynamics (co-author) (1992); NASA/Space Club Low Memorial Engineering Fellowship (1993); NASA Spaceflight Medal (1997, 1998, 2005, 2010); NASA Outstanding Leadership Medal (2000); UC Davis Medal (2005); NASA Thorne Safety Award (2007); NASA Distinguished Service Medal (2011).

EXPERIENCE: Robinson started work for NASA in 1975 as a student co-op at NASA's Ames Research Center in California. After working as a graphic artist, surveyor, musician, and radio DJ, he joined NASA Ames in 1979 as a research scientist in the fields of fluid dynamics, aerodynamics, experimental instrumentation, and computational scientific visualization. While at NASA Ames, Robinson earned masters and doctorate degrees from Stanford University, with research emphasis in turbulence physics, and additional research in human-eye dynamics. Robinson also founded and operated a computer graphics software firm in Silicon Valley from 1982-1986. In 1990, Robinson was selected as Chief of the Experimental Flow Physics Branch at NASA's Langley Research Center in Virginia, where he led a group of 35 engineers and scientists engaged in aerodynamics and fluid physics research. In 1993, Robinson was awarded the NASA/Space Club Low Memorial Engineering Fellowship, and was assigned for 15 months to the Massachusetts Institute of Technology (MIT) as Visiting Engineer in the Man Vehicle Laboratory (MVL). As an MVL team-member, he conducted neurovestibular research on astronauts on the Spacelab Life Sciences 2 Shuttle mission (STS-58). Additional MIT research included EVA dynamics for satellite capture and space construction. While at MIT, Robinson was also a visiting scientist at the U.S. Department of Transportation's Volpe National Transportation Systems Center, doing research on environmental modeling for flight simulation, cockpit human factors for GPS-guided instrument approach procedures, and moving-map displays. Robinson returned to NASA Langley in September 1994, where he accepted a dual assignment as research scientist in the Multidisciplinary Design Optimization Branch, and as leader of the Aerodynamics and Acoustics element of NASA's General Aviation Technology program. Robinson has been flying since age 14, and has logged over 3500 hours in flight vehicles ranging from antique taildraggers to NASA space shuttles.

ASTRONAUT EXPERIENCE: Dr. Robinson was selected as an astronaut in December 1994, and reported to the Johnson Space Center in March 1995. He held a wide variety of technical assignments within the Astronaut Office including: testing space shuttle flight-control software, developing on-board computer and flight crew equipment, helping to develop the Space Station robot arm, and leading an astronaut team to specify window requirements for the Orion crew spacecraft. He has also served as Spacecraft Communicator (CAPCOM) in Mission Control for 17 shuttle missions (including Lead Capcom for the final shuttle mission, STS-135), functioning as the voice link between space shuttle crews and Mission Control. More recently, Robinson served for two years as Chief of Safety for the Astronaut Office. Beginning in January 2012, Dr. Robinson served as Director of the NASA JSC Virtual Reality Laboratory, as well as Chief of Aviation Safety for the Astronaut Office.

Stephen Robinson retired from NASA on June 30th, 2012, after 17 years as an Astronaut and 36 years of NASA service. He is now Professor of Mechanical and Aerospace Engineering at the University of California, Davis.
Dr. Stephen Robinson has flown on four Space Shuttle missions, and has served as a back-up crewmember for the fourth crew of the International Space Station:

Shuttle Mission STS-85 Discovery (August 7 to 19, 1997) was a 12-day mission during which the crew deployed and retrieved the CRISTA-SPAS satellite, operated the Japanese Manipulator Flight Demonstration (MFD) robotic arm, studied changes in the Earth's atmosphere and tested technology destined for use on the future International Space Station. Robinson's responsibilities on STS-85 included flying both the shuttle robot arm and the experimental Japanese robot arm, and serving as a contingency EVA (spacewalk) crewmember. The mission was accomplished in 189 Earth orbits, traveling 4.7 million miles in 284 hours and 27 minutes.

Shuttle Mission STS-95 Discovery (October 29 to November 7, 1998) was a 9-day science mission during which the crew supported over 80 payloads, including deployment of the Spartan solar-observing spacecraft, the Hubble Space Telescope Orbital Systems Test Platform, and investigations on space flight and the aging process with crew member John Glenn. As Payload Commander, Robinson was responsible for the accomplishment of all scientific objectives by the crew. As prime operator of the shuttle's robot arm, Robinson deployed and retrieved the Spartan satellite. The mission was accomplished in 134 Earth orbits, traveling 3.6 million miles in 213 hours and 44 minutes.

ISS Expedition 4 Backup (July 1999 to December 2001) Robinson served as backup crew member for the Space Station Expedition 4 crew, which included cosmonaut training and certification in Star City, Russia.

Shuttle Mission STS-114 Discovery (July 26 to August 9, 2005) was the “Return to Flight” mission - the first shuttle flight in the 2.5 years after the loss of Columbia. The objective of the mission was to re-supply the International Space Station and to evaluate new procedures for flight safety and Shuttle inspection and repair techniques. Robinson served as Flight Engineer and also performed 3 spacewalks totaling 20 hours and 5 minutes of EVA time, including an unplanned and unprecedented repair of Discovery’s heat-shield. After a 2-week, 5.8 million mile journey in space, Discovery and its crew returned to land at Edwards Air Force Base, California. Mission duration was 333 hours, 32 minutes, 48 seconds, in 219 orbits.

Shuttle Mission STS-130 Endeavour (February 8-21, 2010) launched at night, carrying aloft the International Space Station’s final permanent modules: Tranquility (Node 3) and the seven-windowed Cupola viewing-station. Tranquility is now the life-support hub of the ISS, containing exercise, water recycling, and environmental control systems. Robinson served as Flight Engineer, as EVA operations officer to direct the three spacewalks from inside Endeavour, and as chief mechanic for outfitting the new Node 3. During the 2-week mission, Endeavour and her crew travelled over 5.7 million miles and completed 217 orbits of the Earth, touching down at night at Kennedy Space Center in Florida.

Summary: Flying on STS-85 in 1997, STS-95 in 1998, STS-114 in 2005, and STS-130 in 2010, Dr. Robinson has logged over 1156 hours (48 days) and 19.8 million miles in space, including over 20 hours spacewalking.

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