



National Aeronautics and  
Space Administration  
March 2018

# Biographical Data

Lyndon B. Johnson Space Center  
Houston, Texas 77058

**MARY ELLEN WEBER, PH.D.**  
**NASA ASTRONAUT (FORMER)**

**PERSONAL DATA:** Dr. Weber was born in 1962 in Cleveland, Ohio. Bedford Heights, Ohio, is her hometown. She is married to Dr. Jerome Elkind, who is originally from Bayonne, New Jersey. She is an avid skydiver and golfer, and also enjoys scuba diving. Her mother, Joan Weber, currently resides in Mentor, Ohio. Her father, Andrew Weber, Jr., is deceased.

**EDUCATION:** Graduated from Bedford High School in 1980; received a Bachelor of Science degree in Chemical Engineering (with honors) from Purdue University in 1984; received a Ph.D. in Physical Chemistry from the University of California at Berkeley in 1988; and received a Master of Business Administration degree from Southern Methodist University in 2002.

**EXPERIENCE:** During her undergraduate studies at Purdue, Dr. Weber was an engineering intern at Ohio Edison, Delco Electronics and 3M. Following this, in her doctoral research at Berkeley, she explored the physics of gas-phase chemical reactions involving silicon. She then joined Texas Instruments to research new processes for making computer chips. Texas Instruments assigned her to a consortium of semiconductor companies, SEMATECH, and subsequently, to Applied Materials, to create a revolutionary reactor for manufacturing next-generation chips. She has received one patent and published eight papers in scientific journals.



Dr. Weber has logged nearly 5,000 skydives and is an active skydiver, with 13 silver and bronze medals to date at the U.S. National Skydiving Championships and a world record in 2002 for the largest freefall formation, with 300 skydivers. In addition, she is an instrument-rated pilot, a skier and a scuba diver.

Dr. Weber was selected by NASA in the 14th group of astronauts in 1992. During her 10-year career with NASA, she held a myriad of positions. She worked extensively in technology commercialization, and, as part of a team reporting to NASA's Chief Executive, she worked directly with a venture capital firm to successfully identify and develop a business venture leveraging a space technology. In addition, Dr. Weber was the Legislative Affairs liaison at NASA Headquarters in Washington, D.C., interfacing with Congress and traveling with NASA's Chief Executive. Prior to this appointment, she was Chairman of the procurement board for the Biotechnology Program contractor, and she also served on a team that revamped the \$2 billion plan for International Space Station research facilities. Dr. Weber's principal technical assignments within the Astronaut Office included participating in critical launch, landing and test operations at Kennedy Space Center, Florida, testing shuttle flight software and working with international space agencies to develop the training protocols and facilities for experiments aboard the space station. A veteran of two spaceflights, STS-70 and STS-101, she has logged more than 450 hours in space. She resigned from NASA in December 2002.

In 2012, Dr. Weber founded STELLAR Strategies, LLC, to provide consulting services and strategies for operations in high-stakes business ventures, technology communications and legislative strategy.

Prior to STELLAR Strategies, Dr. Weber was Vice President for Government Affairs and Policy for nine years at the University of Texas Southwestern Medical Center.

Dr. Weber currently serves on the Board of Directors of Uplift Education, a charter school system in Dallas, Texas. She also serves on the Advisory Board of Directors for the World Air League. In addition, she is joining the Committee on Innovation and Technology for the NASA Advisory Council, which advises NASA's Chief Executive. She also serves on Congressman Pete Sessions' Academy Selection Board, which recommends nominees to the U.S. Military Academies.

**SPACEFLIGHT EXPERIENCE:** STS-70 Discovery (July 13 to July 22, 1995) successfully delivered to orbit a critical NASA communications satellite, TDRS-G. Dr. Weber's primary responsibility was checking the systems of the satellite and sending it into its 22-thousand-mile orbit above the equator. She also performed biotechnology experiments, growing colon cancer tissues never before possible. She was the primary contingency spacewalker and the medical officer. The STS-70 mission was completed in 142 orbits of the Earth, traveling 3.7 million miles in 214 hours and 20 minutes.

STS-101 Atlantis (May 19 to May 29, 2000) was the third shuttle mission devoted to International Space Station construction. The crew repaired and installed a myriad of electrical and life-support components, both inside and out, and boosted the station to a safe orbit. Dr. Weber's two primary responsibilities were flying the 60-foot robotic arm to maneuver a spacewalking crewmember along the station surface and directing the transfer of more than three thousand pounds of equipment. The STS-101 mission was accomplished in 155 orbits of the Earth, after traveling 4.1 million miles in 236 hours and 9 minutes.

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