



John B. Charles, Ph.D.

Scientist in Residence
Space Center Houston
Manned Space Flight Education Foundation

John B. Charles is Space Center Houston's first scientist in residence, enhancing guest experience by augmenting the human health and performance aspects of the nonprofit's exhibits, presentations and demonstrations.

Charles served for 33 years at NASA, culminating as Chief Scientist, Human Research Program at Johnson Space Center. Previously, he was the associate manager, International Science, where he led NASA's space life sciences planning for the joint US/Russian one-year mission on the International Space Station, including the Twins Study.

His research includes co-developing fluid-loading countermeasures to protect space shuttle astronauts from fainting during re-entry and landing. Charles also led investigations into the cardiovascular effects of spaceflight using ultrasound, in-flight lower body negative pressure and re-entry data recording on the space shuttle and on the Russian space station Mir. He coordinated NASA's biomedical, biological and microgravity investigations as mission scientist on Mir, John Glenn's shuttle flight and on Space Shuttle Columbia's last mission.

Charles is a Fellow of the Aerospace Medical Association and the 2017-2018 President of its constituent Space Medicine Association. He is a Full Member of the International Academy of Astronautics (IAA) and co-chaired their 18th IAA "Humans in Space Symposium" in Houston in 2011.

His awards include the American Institute of Aeronautics and Astronautics' Jeffried Aerospace Medicine and Life Sciences Achievement Award (2019), the National Space Club and Foundation's Eagle Manned Mission Award (2017), the Aerospace Medical Association's Joseph P. Kerwin M.D. Award (2011) and the Space Medicine Association's Strughold Award (2001). NASA presented him with their Exceptional Service Medal (2018) and Exceptional Achievement Medal (2014).

Charles earned his B.S. in biophysics at The Ohio State University and his Ph.D. in physiology and biophysics at the University of Kentucky. He has published 75 scientific papers and space history articles. He is an adjunct professor of kinesiology at Texas A&M University.

The Manned Space Flight Education Foundation is a 501(c)(3) nonprofit science and space exploration learning center with extensive educational programs. Space Center Houston is the cornerstone of its mission to inspire all generations through the wonders of space exploration. The center draws more than 1.25 million visitors annually, was named "Best Museum in Texas" by *USA Today* and generates a \$118.7 million annual economic impact in the greater Houston area. Space Center Houston is a Smithsonian Affiliate, the Official Visitor Center of NASA Johnson Space Center and a Certified Autism Center. More than 250,000 teachers and students from around the world visit the center annually to experience the educational space museum with more than 400 things to see and do. For more information, go to www.spacecenter.org.