## **Biography**

Edward M. Henderson, Mack has 50 years experience with NASA in a wide variety of jobs. After his cooperative education program with the Army at Redstone Arsenal, AL, working on rocket guided missiles. Mack transferred to the NASA's MSFC, where he worked in the Aeroballistics Lab helping to define the aerodynamics used for the Saturn V. After receiving a B. S. in Aerospace Engineering at Virginia Polytechnic Institute and State University, Mack went to the Manned Spacecraft Center in Houston, TX. and worked in Mission Planning and Analysis for Gemini, Apollo and Space Shuttle programs. He was the abort subsystem design manager for the shuttle and as a Flight Design Manager, Mack lead the shuttle design work for the first Spacelab mission and the first west coast launch (which never flew). He later headed the ascent and entry flight design, owning more than 1700 software I-loads used for shuttle ascent and launch aborts.

Mack moved to the Flight Directors Office, where he was responsible for Space Shuttle and the International Space Station Program integration for the mission operations and managed the SPAN (mission control's spacecraft analysis room) for more than 50 shuttle flights. Mack moved to the Shuttle Program (SSP) office in 1990. While in the SSP, he helped set up the Space Shuttle Development office and control board that over saw major shuttle upgrade projects, designed to keep the shuttle flying to 2020. Mr. Henderson led a technical team on improvements for shuttle derived launch vehicles, significantly increasing performance at reduced cost. Once the vision for space exploration and the early retirement of the shuttle was announced, Mack helped set up the transition team charged with safely retiring the space shuttle. He led a team of project leads in an evaluation of costs and impacts for flying the Space Shuttle longer. He also was the lead for advanced planning for shuttle applications that would help reduce risks and operations cost for future programs, Mack is the co-lead for a joint NASA and DoD team working on defining a space based solar power demonstration that could be flown up on the shuttle to the ISS for the first WPT from space.

Mack retired from NASA the end of 2011. He is currently active in church work and supports telecoms on ongoing space activities.

Mr. Henderson has received some prestigious awards that include;

1983 NASA Exceptional Service Medal for his flight design leadership for the first Space Shuttle /Spacelab mission STS-9.

2001 AIAA Aerospace Maintenance Award for his work on the Space Shuttle upgrades 2007 NASA Exceptional Service Medal for his continued pursuit of improvements for shuttle flight safety

2010 AIAA Associate Fellow

2010 Rotary National Award for Space Achievement Foundation's Stellar Award