Henry M. Cathey, Jr
Interim Deputy Director, Physical Science Laboratory, New Mexico State University

Henry Cathey is the Deputy Director of the New Mexico State University's (NMSU) Physical Science Laboratory (PSL). He has worked for PSL for over 20 years with most of that in support of the NASA Scientific Balloon Program. His core concentrations have focused on research and new technology implementation. He has worked in almost all aspects of the NASA Balloon R&D program. He has served as one of the technical/project leads on the NASA Super Pressure Balloon (SPB) vehicle project responsible for the development of the next generation of balloons that increase payload capacity, improve performance, and extend duration of balloon flights. He served as the lead for the two recent mid-latitude flights that set a flight duration record of over 32 days and 46 days. He has coordinated and served as the leader for both large model balloon testing, and flight lead for all of the NASA Super Pressure Balloon test flights.

Mr. Cathey has leadership experience in managing a staff of engineers, R&D efforts, test programs, projects, and flight campaign efforts. He has served as the technical contract manager responsible for technical direction, schedules, progress and cost monitoring, and technical decisions. He has coordinated and managed dozens of ground and flight tests. Mr. Cathey has served as the test flight PI or co-PI for all previous NASA Super Pressure vehicle test flights including both domestic and international (Australia, Sweden, New Zealand, and Antarctica) test flights. He physically prepared every NASA SPB balloon for launch including mechanical and electrical integration, participated in flight line efforts, was responsible lead for in-flight decisions, and was flight monitoring lead. He prepared all post flight reports including flight data, data plots, video, and images.

Mr. Cathey serves as the NMSU's Physical Science Laboratory lead for efforts related to the FAA Center of Excellence (COE) for Unmanned Aircraft Systems (UAS) research. As part of the ASSURE (Alliance for System Safety of UAS through Research Excellence) team, PSL is helping safely integrate UAS's into the national airspace. Specific effort focus on small UAS Detect and Avoid Requirements Necessary for Limited Beyond Visual Line of Sight Operations. He is also leading an FAA STEM education effort that focuses on UAS's. Events will target middle school students across New Mexico through UAS Roadshows and summer camp.

He has expertise in the development of materials for specific applications, hardware and systems development, analytical tool generation, test design and testing. He previously worked on the NASA's first Discovery mission the Near Earth Asteroid Rendezvous (NEAR) spacecraft, the Rossi X-Ray Timing Explorer, the Tropical Rainfall Mission, the first Hubble Space Servicing Mission, and other spaceflight missions. Before entering ballooning he worked extensively in the areas of thermal analysis and in the design of electronics packaging. He has designed radio receivers, spectrophotometers, colorimeters, and numerous spaceflight electronic boxes.

In January 2016, he was presented with a NMSU 2016 Research Discovery Award. In July of 2015 he was awarded a NASA Exceptional Public Service Medal for his contributions to NASA's mission. Mr. Cathey is an Associate Fellow member of the American Institute of Aeronautics and Astronautics (AIAA) and current Chair the AIAA Balloon Systems Technical Committee. He has organized technical conferences, has authored over 45 technical papers, and has served as a technical article reviewer for international refereed journal publications.