

Dr. David Whiteman received his B. A. in Physics cum laude from Williams College in 1979. Shortly thereafter, he joined NASA-Goddard Space Flight Center. In 1980, he began working with Dr. S. Harvey Melfi, one of the pioneers of atmospheric measurements using Raman lidar. Together in 1985 they demonstrated the first meteorologically useful measurements of the evolution of water vapor in the troposphere using Raman Lidar which were presented on the cover of the Bulletin of the American Meteorological Society. In 2000, Dr. Whiteman received his PhD in physics from the University of Maryland, Baltimore County with research entitled "Investigation of cloud properties using a Raman Lidar". While at NASA, Dr. Whiteman worked in the design, implementation, field deployment and analysis of lidar systems for atmospheric measurements including the first mobile stratospheric ozone lidar system (STROZ-LITE), several versions of water vapor Raman lidars including the Scanning Raman Lidar, Raman Airborne Spectroscopic Lidar (RASL) and ALVICE (Atmospheric Laboratory for Validation, Interagency Cooperation, and Education) and ACE Multiwavelength Lidar Optical Data Simulator systems. He successfully deployed lidar systems and various other atmospheric instruments to more than 25 field experiments in the United States and abroad. He has organized and led several atmospheric field campaigns including the AIRS Water Vapor Experiment-Ground (AWEX-G) held in 2003 at the DOE/Southern Great Plains site and the series of Water Vapor Variability Satellite/Sondes (WAVES) campaigns held in 2006 – 2012 at the Howard University Research Campus in Beltsville, MD. He has developed new lidar remote sensing techniques including ones for retrieving both warm and cold cloud physical properties using Raman lidar. He was awarded the 2001 Allen Prize by the Optical Society of America, has been a member of the American Meteorological Society's Committee on Laser Atmospheric Sensing, was the chairman of the first International Raman Lidar Techniques Workshop held at NASA/GSFC in 2004, served on the International Organizing Committees of four Latin American Lidar Workshops held in Ilha Bella, Brazil, Buenos Aires, Argentina, La Paz, Bolivia and Pucon, Chile, is a member of the GCOS Working Group on Atmospheric Reference Observations and member of the GCOS Reference Upper Air Network Task Team investigating measurement needs for GRUAN. He organized and chaired the NDACC Raman water vapor calibration workshop held in Greenbelt, MD in May, 2010. Dr. Whiteman was also involved in organizing the 2014 WMO/GRUAN International Coordination Meeting held in Greenbelt, MD. Dr. Whiteman is the sole US representative on the International Steering Committee for the WMO Global Atmospheric Watch site at Mt. Chacaltaya in Bolivia. He has authored more than 90 refereed journal articles and has received numerous NASA awards for service including the 2008 Robert H. Goddard Award for Science. Dr. Whiteman retired from NASA in 2017 and is now a senior research scientist at the Howard University Beltsville Campus in Beltsville, MD. As a consultant, Dr. Whiteman has recently worked on two NASA contracts involving spaceborne lidar simulations and has served on a proposal preparation team responding to a NASA EVS3 opportunity.

Publications

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