

## **Biography: John Gerlach, TC4 Scientist for NASA NPOL Radar**

Dr. John Gerlach is the head of NASA's Instrumentation Sciences Branch at the Goddard Space Flight Center. Members of his branch conduct leading-edge research in remote sensing, including developing instrumentation to measure upper air processes, to quantify precipitation characteristics, to do bathymetry and coastal topography, and measure cloud, land and sea surface properties. Branch members have scientific leadership roles in current and proposed NASA satellite missions, including the Tropical Rain Measurement Mission (TRMM), the Global Precipitation Measurement (GPM) mission, Aquarius, CloudSat/CALIPSO, the AMSR-E sensor on AQUA and NPOESS. In addition, they are involved in developing new algorithms to analyze data from satellite sensors and developing small, uninhabited aerial vehicles (UAV's) as scientific measurement platforms.

Dr. Gerlach is the TRMM ground validation manager and has developed the NASA Polarimetric (NPOL) research radar, a state-of-the-art weather research radar that will be installed in Panama to support the NASA TC4 mission in July and August of 2007. Last year, he oversaw the installation and operation of the NPOL radar in Senegal and another research quality C-band radar in the Cape Verde Islands for the NASA NAMMA mission. His research has involved installing and overseeing the operation of a NEXRad quality polarimetric radar in Kwajalein, Republic of the Marshall Islands, installing and operating a research radar in the interior of Brazil, and twice installing research weather radars on ships belonging to the Peoples Republic of China to support NASA missions. Prior to leading the Instrumentation Sciences Branch, he created the Atmospheric Sciences Research Facility at the NASA Wallops Island Facility, and was active in studying thunderstorm dynamics, especially lightning including its effects on airplanes.

He graduated in 1984 from Indiana University in Bloomington, Indiana with a PhD in nuclear theory. He is married with two adult children and four grandchildren.