# Dr. Nancy L. Baker

Dr. Nancy L. Baker received a B.S. in Atmospheric Sciences from Oregon State University in 1981. She was introduced to the study of planetary atmospheres in 1980 while participating in the Summer Institute on Planets and Climate at NASA's Goddard Institute for Space Studies (GISS). She continued those studies at the University of Washington, where she investigated the role of the semi-diurnal tide in the maintenance of the super-rotation of the Venus atmosphere, and earned a M.S. in Atmospheric Sciences in 1985.  She began working for the U.S. Navy in Monterey, CA in 1985, where she was responsible for developing the data pre-processing and quality control algorithms for conventional and satellite observations for the global and mesoscale NWP systems. She shifted her focus to satellite data assimilation in the mid-late 1990's.

While working full-time for the Navy, she continued her academic studies at the Naval Postgraduate School, earning a Ph. D. in meteorology in 2000, with the late Dr. Roger Daley and Dr. Russell Elsberry serving as co-advisors. Her dissertation research developed the adjoint of the data assimilation system as a complement to the adjoint of the forecast model to understand the sensitivity of the NWP forecast aspect (e.g., forecast error) on the observations, the background, and the characteristics of the data assimilation system.

Her present research areas include satellite data assimilation, developing and utilizing the adjoint-based observation impact technique, and developing future data assimilation systems. She leads the data assimilation section of the Marine Meteorology Division at the Naval Research Laboratory in Monterey, California. She serves as the U.S.

Navy's Technical Liaison to the Joint Center for Satellite Data Assimilation, as a member of the American Meteorological Society Committee on "Satellite Meteorology and Oceanography", and as a research advisor for the National Research Council.