

Biography: Michael J. Kurylo, TC4 Program Scientist

Dr. Michael Kurylo is the Program Scientist for the TC4 mission. The Program Scientist, for such large science campaigns as TC4, is the senior NASA scientific representative who has the responsibility for the scientific and operational planning to ensure the safety and success of this campaign. The Program Scientist assists the Mission and Platform Scientists in defining both general and specific scientific objectives of the campaign and in selecting the aircraft instrument payloads and the measurement and analysis members of the Science Team. During the implementation of a field experiment, the Project Scientist serves as the principal point of contact between NASA and the host institutions and scientists. He will also be working as a field scientist during the mission, using dropsondes aboard the DC-8 to obtain vertical profiles of atmospheric pressure, temperature, and water vapor.



Dr. Kurylo currently works at NASA Headquarters in Washington, DC and is a Program Scientist in Atmospheric Composition in the Earth Science Division of NASA's Science Mission Directorate. He received his Bachelor of Science degree (magna cum lauda) in chemistry from Boston College, and his PhD from The Catholic University of America. He has worked as a scientist for the U.S. Government for over 35 years.

Dr. Kurylo's scientific expertise is in the research of photochemistry and kinetics with an emphasis on atmospheric processes, measurements to understand the chemical and physical state of the stratosphere and upper troposphere, and assessment of the impact of these changes on the underlying troposphere and on global climate. He is the author (or co-author) of more than 135 scientific articles, and has given more than 180 technical presentations nationally and internationally. He has served on the International Ozone Trends Panel under the auspices of the United Nations Environmental Programme (UNEP) and the World Meteorological Organization (WMO), has chaired the international Steering Committee of the Network for the Detection of Atmospheric Composition Change (NDACC), is an ex-officio member of the Scientific Steering Group for the Stratospheric Processes and their Role in Climate (SPARC) Project of the World Climate Research Program, and is a member of the International Ozone Commission of the International Association of Meteorology and Atmospheric Sciences (IAMAS).

Dr. Kurylo has had extensive experience in supporting and leading complex field missions. He has acted as Program Scientist for numerous NASA suborbital field experiments conducted for satellite validation and science, including:

- The Airborne Arctic Stratospheric Expedition (AASE) in Stavanger, Norway, 1989.
- The second Airborne Arctic Stratospheric Expedition (AASE II) in Fairbanks, Alaska and Bangor, Maine, 1991-1992.

- The Airborne Southern Hemisphere Ozone Experiment (ASHOE) conducted from Hawaii, Fiji, and New Zealand, 1994.
- The Stratospheric Tracers of Atmospheric Transport (STRAT) experiment conducted from California and Hawaii, 1995-1997.
- The Photochemistry of Ozone Loss in the Arctic Region in Summer (POLARIS) airborne campaign conducted from California and Alaska, 1997.
- The SAGE III Ozone Loss and Validation Experiment (SOLVE) in Kiruna, Sweden, 1999-2000.
- The follow-on SOLVE-II campaign, also conducted in Sweden, 2003.
- Several Aura Validation Experiment (AVE) campaigns, conducted in multiple locations, 2004 – 2006.

Dr. Kurylo has received numerous awards and acknowledgments over the course of his very distinguished career with the U.S. Government, including the U.S. Dept. of Commerce Silver and Bronze Medals, the NASA Exceptional Service Medal, the NOAA Environmental Hero Award, and the Catholic University of America Alumni Achievement Award in the Field of Science.