V. RAO KOTAMARTHI

Climate Research Section
Environmental Science Division
Argonne National Laboratory

Education:

Ph. D.	University of Iowa, Iowa City, Ph.D., Chemical Engineering 1991
M.E.	Indian Institute of Science, India, M.E., Chemical Engineering, 1986
B.E.	Osmania University, India, Chemical Engineering, 1984

Professional Experience:

2005-Present	Atmospheric Scientist and Acting Section Manager, Environmental Science Division
1996-2005	Meteorologist and Atmospheric Scientist, Environmental Research Division Argonne National Laboratory

Responsible for the development and evaluation of chemistry and transport models for air quality and tropospheric chemistry studies, higher order closure models for fast chemistry and canopy turbulence. Developed new methods for analyzing data collected from aircraft platforms and performed modeling studies to identify the role of aerosols on tropospheric chemistry, the impact of replacement chlorofluorocarbons on stratospheric ozone. Initiated the development of new 3-D models for the global scale analysis of the environmental impacts of CFC replacement chemicals. Responsible for identifying and developing new research areas for the climate research group and developing collaborations with other climate research groups within and outside Argonne. Acted as a research mentor and PhD committee member for students from University of Chicago and University of Illinois, Urbana-Champaign.

Summary of Previous Experience:

1991-1996	Atmospheric and Environmental Research, Inc., Cambridge, MA

Developed trajectory and photochemical box models for evaluating trace gas data sets collected from aircraft platforms by the MASA GTE program. Acted as the onsite modeler for the NASA GTE PEM-TROPICS B program. Provided model results and performed model sensitivity analysis to the IPCC assessment of tropospheric oxidant and methane sources and sinks in the year 1994. Adapted the Harvard 3-D global scale tropospheric atmospheric chemistry model to evaluate the lifetimes and impact on stratospheric ozone of CFC replacement chemicals and the impact of their potential degradation to long-lived components in the atmosphere and their deposition.

Research Interests:

Current research interests are in developing coupled models for regional scale climate studies, developing process-scale models of aerosols and their impacts on climate, urban scale air quality and dispersion studies. In collaboration with the University of Chicago Center for Integrating Environmental Science and Statistics we are also developing methods for model inversion and data assimilation into atmospheric trace gas models. Other interests include high-

speed computing and global scale coupled climate models and their treatment of terrestrial carbon sources and sinks.

Selected Professional Activities:

On-site modeling support for the PEM-TROPICS mission conducted by NASA under the GTE program (1996)
Science team member PEM-TROPICS B conducted by NASA (1998-2000)
Principal Investigator, Center for Integrated Statistics and Environmental Studies, University of Chicago, Chicago, IL (2002-Present)
Research Professor, Department of Chemical and Environmental Engineering, IIT Chicago (Apr. 2004-Present)
Modeling Coordinator for the Atmospheric Chemistry Program, DOE (2002-2003)
Principal Investigator, Atmospheric Science Program, DOE (2004-2007)
STEAC member, Atmospheric Chemistry, American Meteorological Society (2005-Present)

Publications:

Over 60 journal articles, extended abstracts, reports, and presentations.