UCAR Trustee Candidate

Dennis W. Thomson

The Members' Nominating Committee is very pleased to renominate Dennis W. Thomson for a second three-year term on the Board of Trustees. Dr. Thomson is a professor of Meteorology and Graduate Program in Acoustics at Pennsylvania State University having served as Head of the department from 1992-1999. His scientific specialty is atmospheric electromagnetic and acoustic propagation and national science policy and administration. During his term on the Board of Trustees, he was part of a group that carefully assessed the recent decline in graduate enrollment in the Atmospheric Sciences. Dr. Thomson is alert to society's demands for more accurate and complete weather assessments and forecasts. On the Board of Trustees he would like to focus his efforts and attentions on UCAR's role in representing the member institutions, nationally, regionally and in society.

PERSONAL STATEMENT

Perhaps the only constant in the atmospheric and oceanic sciences is the certainty of change. In our UCAR-member community of scientists understanding change offers today a number of not only scientific, but also societal/policy/communications challenges. Scientifically, the challenges include continuing to improve our ability to analyze and predict phenomena having spatio-temporal scales ranging from atomic and turbulent to weather and climate. Clearly, the past 50-100 years have produced enormous advancements in knowledge and major accomplishments in the application of that knowledge to problems concerning weather, the environment, defense, and climate. At the same time, and perhaps now more than ever, the pressures and expectations from society continue to change. For example, demands appear to be increasing for "products" such as more accurate (By what standard?) and higher value (By what measure?) assessments and forecasts. Yet most of us would probably agree that societal expectations have increased faster than have the financial resources that are necessary to make progress towards the solution of tough, often interdisciplinary, problems.

To the best of their abilities, committees and individuals in many federal agencies, the AMS, CORE, and UCAR/NCAR have worked to assess the state of our science and to define future challenges and opportunities (e.g., Atmospheric Sciences Entering the 21st Century, NSF Geosciences Beyond 2000, and the UCAR Year 2000 Retrospective). Substantial progress also has been made recently in defining the connections between what society needs and what our community of scientists can do (e.g., the cooperatively drafted AMS and UCAR documents prepared for the transition between the Clinton-Gore and Bush-Cheney administrations).

Although we should be proud of, and grateful for, the progress recently made, I believe that the UCAR-member universities need to seek further means to communicate clearly and strongly our common interests, capabilities and problems. The "scales" of the policy and communications challenges and opportunities range from local to national government, and from our classrooms to more effectively exploiting opportunities in the media. UCAR has done an excellent job of selling many aspects of our science, and of guiding and managing the programs in UCAR and NCAR. During the last 40 years UCAR/NCAR have also provided the
UCAR-member community with unique and exceptional observational and computational facilities. In these times of increasing pressures and stress, should our community of UCAR-member universities ask even more of UCAR?

During the past two years, several of us on the Board of Trustees worked closely with Rick Anthes and his associates to attempt, for the first time, to assess some of the factors that control national graduate enrollments in the atmospheric sciences. I hope that the results of these efforts have helped faculty members at the UCAR-member universities understand the impact of national and international demographics on their graduate student populations. However, the subject of graduate student enrollments is only one area in which faculty at UCAR-member institutions are competing with one another while at the same time they have common community needs.

I am looking forward to serving a second term on the UCAR Board of Trustees. If I am elected I would like to focus my non-administrative responsibilities and attention towards finding ways in which UCAR might more aggressively and effectively represent the common, community interests of UCAR-member institutions, not only at NSF and "in Washington" but also regionally and nationally in society-at-large. During the last three years, I have spoken to many colleagues at UCAR-member institutions from around the nation. Many of them have expressed concern to me that UCAR's primary interests appear to be NCAR and the UCAR Office of Programs. I prefer to view the member universities, at the very least, as being the third leg of a UCAR tripod.

If in these times of change we in the universities are to be able to work effectively in the science that we love, we must find ways to spend less time on competing for decreasing resources—both among ourselves and between "us" and UCAR/NCAR—and more time working cooperatively to exploit and expand the opportunities available to all of us. If truly there are some problems (One oft mentioned is equitable access to funding.), then these problems need to be addressed. But if "problems" such as these are not real but perceptual, then we still have a community problem in communications. In any case, I believe that it is appropriate for members of your Board of Trustees to be working on your behalf on these sorts of issues. If you concur, I hope I will have your support and, if elected—and we can get some new initiatives organized—I hope that you will be among those willing to contribute to furthering community-serving activities.

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**BIOGRAPHICAL INFORMATION**

**Title/Position:** Professor of Meteorology and Graduate Program in Acoustics

**Institution:** Pennsylvania State University

**Education:**
- B.S., Physics, University of Wisconsin-Madison, 1963
- M.S., Meteorology, University of Wisconsin-Madison, 1964
- Ph.D., Meteorology, University of Wisconsin-Madison, 1968

**Area of Specialty:** Atmospheric electromagnetic and acoustic propagation phenomena, atmospheric sounds and noise propagation, defense systems and signal propagation, national science policy and policy administration.
Research/Academic Experience:
1968-69, Post-doctoral fellow, Deutscher Akademischer Austauschdienst, Meteorologischen Institut der Universitat Hamburg, Hamburg, Germany
1969-70, Visiting Asst. Prof., Dept of Meteorology, Univ. of Wisconsin
1970-72, Asst. Prof., Dept. of Meteorology, Penn State University
1972-78, Assoc. Prof., Dept. of Meteorology, Penn State University
1977-78, Visiting Scientist, Risoe National Laboratory, Roskilde, Denmark
1978-present, Prof. of Meteorology and Graduate Program in Acoustics, Penn State University
1986, G.J. Haltiner Professor of Meteorology, Naval Postgraduate School

Administrative Experience:
1989-91, IPA Scientific Officer, Office of Naval Research
1992-1999, Head, Dept. of Meteorology, Penn State University
Member academic program review committees at Dept. of Atmos. Sci, University of Arizona (89), Dept. of Meteo., Naval Postgraduate School (92), Dept. of Atmos. Sci, Colorado State Univ. (94), School of Meteo., Univ. of Oklahoma (98).

UCAR Participation:
Summer 1965, Graduate student visitor, NCAR FOF and RAF
Fall 1972, Visiting Scientist, NCAR, RAF
1971-77 Member and chair (73-76), NCAR, RAF Panel
1976, UCAR SPEC, Field Observing and Research Systems Facilities
1981, UCAR SPEC, Research Aviation and Systems Facilities
1984-85, UCAR Membership Committee
1989-90, UCAR/AMS Comm. on Study of Observational Systems
1992-96, Member and chair (1994), NCAR Observing Facilities Panel
1998-present, Member, UCAR Board of Trustees incl. trustee liaison to Unidata, personnel committee and graduate enrollment committee.

Other Science Community and Policy activities:
1984-87, NOAA/ERL, Adv. Panel on Profiler Technology
1985-95 Member and chair (87, 91, 95) University of Chicago Review Comm. for Env. Res Div. of Argonne National Laboratory
1992-95, Board of Directors, Applied Research Lab., Penn State University
1993-95, Director's Physical Sciences Adv. Comm., Lawrence Livermore National Laboratory
2001, "Senior" participant in first AMS Atmospheric Policy Colloquium

Other:
Proud advisor of more than 50 M.S. and Ph.D. graduates in meteorology and acoustics at Penn State.
Fellow, American Meteorological Society