Stanford University

Stanford has been a UCAR member since 1973. Research and education in atmospheric sciences were previously distributed across several departments but have recently been consolidated in two new programs: the Atmosphere and Energy Program in the Department of Civil and Environmental Engineering and the university-wide Woods Institute for the Environment. The new Institute focuses on the development of practical solutions to environmental challenges with four areas of emphasis in energy and climate systems, land use and conservation, oceans and estuaries, and freshwater. UCAR related activities also take place under the Global Climate and Energy Project, the Precourt Institute for Energy Efficiency, and the new Department of Environmental Earth System Science. There are 37 faculty distributed across these programs with expertise in UCAR related fields.

The Atmosphere and Energy program offers two newly created options for B.S. degrees, an M.S., and a Ph.D. In the past three years an average of 17 M.S. students have been enrolled in the program. Fellowships, teaching assistantships, and research assistantships are available for graduate students. In the past five years, Stanford has awarded a total of ~70 Ph.D. degrees in the atmospheric sciences and related areas through several departments and programs.

Participating faculty actively publish in the leading journals such as PNAS, Science, Nature, and the American Geophysical Union journals. Six faculty members were lead authors on IPCC chapters and reports.

Stanford faculty have been very active in UCAR activities with members on the Board of Trustees and the University Relations Committee. Faculty have given several lectures at NCAR and participated in NCAR colloquium and courses. There are also strong linkages between Stanford researchers and the High Altitude Observatory, the NCAR computation facilities, and field campaigns such as T-REX. With the development of the new Atmosphere and Energy program and the Woods Institute, even more active participation in UCAR is anticipated.

Facilities for research in atmospheric science were not listed in the application; however, Stanford’s well known field stations and computing facilities include the Hopkins Marine Station, the Jasper Ridge Biological Preserve, and the High Productivity Technical Computing facility. The Department of Civil and Environmental Engineering offers laboratories for fluid mechanics, water quality, environmental computing, and project-based learning. In addition, the Carnegie Institution on the Stanford campus has extensive facilities for research in geophysics and global ecology.

The UCAR Membership Committee concludes that the membership criteria are fulfilled, and recommends to the Members’ Representatives that the membership of Stanford University be continued as provided by the bylaws.