Pennsylvania State University

UCAR Membership Renewal Review – 2010

The Pennsylvania State University (PSU) is one of the founding members of UCAR in 1959. Research and education in Atmospheric Sciences are mainly resided in the Meteorology Department, with collaborations with the following institutes and departments at PSU: Geosciences, Energy and Mineral Engineering, Statistics, Forest Resources, Earth and Environmental Systems Institute, and Applied Research Laboratory. The Meteorology Department offers both undergraduate and graduate degrees – Bachelor of Science, Master of Science, Doctor of Philosophy, and Web-based distance learning certificate. In the past 5 years (Fall 2004 to Spring 2010), the department granted 34 PhD degrees, 81 M.S. degrees and 393 B.S. degrees. Average enrollment to the meteorology program is typically about 300 undergraduates and more than 60 full-time graduate students. To support instructional programs, the Meteorology Department operates computer-based physical meteorology and weather analysis laboratories, as well as fully functional television and radio studios.

The PSU Meteorology Department has 23 tenured or tenure-track faculty, 15 research faculty, 15 research staff and 6 instructors. Areas of active research include: atmospheric business and policy, atmospheric chemistry, atmospheric dynamics, boundary layer physics, turbulence, climate, cloud physics, Earth-atmosphere interactions, mesoscale meteorology, numerical weather prediction, oceanography, radiative transfer, remote sensing, statistical meteorology, synoptic meteorology, tropical meteorology, and weather risk. The Meteorology Department has encouraged the development of special sensors and measurement systems to support diverse theoretical studies and observational programs. It has been a leader for more than three decades in the development and application of mesoscale atmospheric models. The Meteorology Department also has a number of mobile, ground-based measurement systems primarily focused boundary layer processes, cloud remote sensing, and trace gas measurements.

PSU faculty receive substantial federal, state and private research funding for studies related to atmospheric sciences, primarily from NSF, NASA, DOE, NOAA, and USDA. Faculty, research staff and students are publishing regularly in first-tier atmospheric science, geophysics, and geochemistry journals.

PSU faculty members have participated in UCAR activities. Meteorology Department faculty have served on a variety of UCAR committees, including the UCAR membership committee, the UCAR trustee, the UNIDATA Policy Committee. The Meteorology Department serves as a Tier 1 level CONDUIT data server for 14 other UNIDATA universities.

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