NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

Office of the NCAR Director

303-497-1110
Director: Timothy Killeen

Earth and Sun Systems Laboratory (ESSL)

303-497-1620
www.essl.ucar.edu
NCAR associate director: Annick Pouquet

Atmospheric Chemistry Division (ACD)

303-497-1401
www.acd.ucar.edu
Director: Daniel McKenna
Focuses on global- and regional-scale air quality and problems related to the complex interactions among the oceans, ecosystems, and atmosphere. Researchers study the cycles of chemicals in the atmosphere, ways in which the composition of the air evolves, and the impact of human activities on atmospheric chemistry.

Climate and Global Dynamics Division (CGD)

303-497-1320
www.cgd.ucar.edu
Acting director: James Hurrell
Strives to obtain a comprehensive understanding of climate system components and the interactions among them, to represent this understanding in models of the components and of the coupled system, and to further our understanding by applying the models to scientific and societal questions and thereby providing a basis for prediction of weather and climate.

High Altitude Observatory (HAO)

303-497-1527
www.hao.ucar.edu
Director: Michael Knölker
Carries out research into the solar interior, the influence of magnetic fields on the structure and dynamics of the solar atmosphere, and the links between the variable solar output and Earth's magnetosphere and outer atmosphere. Because some solar changes influence Earth's space environment and its climate, understanding solar variability is fundamental to understanding and potentially predicting the variability of Earth's atmosphere.

The Institute for Multidisciplinary Earth Studies (TIMES)

303-497-1620
www.essl.ucar.edu/times/times.html
Acting director: Roy Rasmussen
Creates an interactive forum for exchanging research and developing priorities for multidisciplinary Earth studies, coordinates and conducts such studies in association with the wider community, catalyzes technology transfer, and contributes to understanding of human interactions in the Earth system.

Mesoscale and Microscale Meteorology Division (MMM)

303-497-8908
www.mmm.ucar.edu
Director: Gregory Holland
Investigates the basic physical processes that govern the weather: how the atmosphere and Earth's surface receive incoming radiation, scatter and absorb it, and retransmit it; how weather and climate are affected by terrain and the characteristics of soil and vegetation; how severe storm systems develop and die; and how precipitation processes occur.

Computational and Information Systems Laboratory (CISL)

303-497-1206
www.cisl.ucar.edu
NCAR associate director: Al Kellie

Scientific Computing Division (SCD)

303-497-1272
www.scd.ucar.edu
Director: Al Kellie
Provides supercomputing resources, scientific visualization tools and facilities, high-speed networks, and associated data-processing capabilities on a variety of computing machines. SCD assists the atmospheric research community through a broad research program in computer science. SCD's data archives included over 2.1 terabytes as of late 2004. Its Advanced Research Computing System places over 2,800 IBM Power 3 and Power 4 processors at the disposal of university and NCAR scientists.

NCAR has implemented its first reorganization in more than a decade. The overall goal is to enhance NCAR's ability to serve as an open and collaborative center for the community. For more information, see the reorganization Web site: www.ncar.ucar.edu/directorate/Reorg

Institute for Mathematics Applied to Geosciences (IMAGe)

303-497-1351
www.cgd.ucar.edu/stats/IMAGe
Director: Douglas Nychka
Brings mathematical tools to bear on fundamental problems in the geosciences and serves as a center of activity and an integrator for the mathematical and geophysical communities. This is being achieved through internal collaborations among NCAR divisions and institutes and through an external network of mathematics centers, university groups, and government laboratories. IMAGe activities emphasize the grand scientific challenges in understanding the Earth system and the resulting enrichment of the mathematical sciences from tackling such problems.

Earth Observing Laboratory (EOL)

(formerly the Atmospheric Technology Division)
303-497-8833
www.eol.ucar.edu
NCAR associate director (as of July 2005): Roger Wakimoto
Acting associate director (through June 2005): William "Al" Cooper
Develops and provides observing facilities and instrumentation, including advanced radars, research aircraft, flux measurement systems, optical instrumentation for trace gas measurement, and integrated sounding systems, to researchers in the atmospheric and related sciences. These facilities allow investigators around the globe to gather data required for their research programs.

Research Applications Laboratory (RAL)

(formerly the Research Applications Program)
303-497-8390
www.ral.ucar.edu
NCAR associate director: Brant Foote
Conducts a comprehensive program of research, development, and technology transfer applied to problems in areas that currently

include aviation, national security, numerical weather prediction, hydrometeorology, surface transportation, and related assessments.

Developmental Testbed Center (DTC)

303-497-8197
box.mmm.ucar.edu/research/dtc
Director: Robert Gall
Allows a wide range of new methods and components to be thoroughly examined in the Weather Research and Forecasting model (WRF) before they are moved closer to operational use. The center also maintains code for various versions of WRF and an archive of each day's forecasts, totaling 200 to 300 terabytes of data per year. Another task is to explore the best means of verifying the model's performance, especially in predicting individual thunderstorms and other features that are omitted from, or more crudely predicted in, current models.

Societal-Environmental Research and Education Laboratory (SERE)

303-497-1602
www.sere.ucar.edu
Acting NCAR associate director: Thomas Bogdan
Promotes multidisciplinary research activities; develops and sustains partnerships between NCAR scientists and their colleagues in the university, government, and private sectors; invests in the 21st-century work force by supporting undergraduate, graduate, and post-graduate career development; and provides leadership in (a) definition, planning, and execution of NCAR efforts in education, (b) development of appropriate social science components for NCAR research activities, and (c) research on human-environment interactions.

Advanced Study Program (ASP)

303-497-1607
www.asp.ucar.edu
Director: William "Al" Cooper
Acting director: Maura Hagan (through June 2005)
Encourages the development of young researchers in the fields of atmospheric and related science and directs attention to timely scientific areas needing special emphasis. The ASP also helps to organize new science initiatives, supports interactions with universities, and promotes continuing education at NCAR.

Institute for the Study of Society and Environment (ISSE)

(formerly the Environmental and Societal Impacts Group)
303-497-8117
www.isse.ucar.edu
Director: Robert Harriss
Studies and illuminates the relevance of coupled natural and human interactions by conducting research that integrates human-environment interactions with atmospheric and Earth system dynamics, defining and implementing science projects and knowledge products for use in decision making and education, and conducting participatory research on science-society interactions to inform geophysical research and to develop conceptual frameworks for improved interactions between science and society.

UCAR OFFICE OF PROGRAMS

Office of the UOP Director

303-497-8647
www.uop.ucar.edu
Director: Jack Fellows

Constellation Observing System for Meteorology, Ionosphere and Climate (COSMIC)

303-497-2600
www.cosmic.ucar.edu
Director: Ying-Hwa "Bill" Kuo
Leads a collaborative science project between the United States and Taiwan to launch a constellation of six microsatellites. Upon its deployment late in 2005, COSMIC will collect atmospheric remote-sensing data for weather prediction, climate, and ionospheric and gravity research.

Cooperative Program for Operational Meteorology, Education and Training (COMET®)

303-497-8470
www.comet.ucar.edu
Director: Timothy Spangler
Serves the atmospheric community by involving scientists from operational and academic settings in providing continuing education for weather forecasters and in developing new forecast techniques. The COMET program produces computer-based educational materials (available free on its MetEd Web site, www.meted.ucar.edu), offers courses and workshops, and supports applied research through its outreach program.

Digital Library for Earth System Education (DLESE) Program Center

303-497-2656
www.dpc.ucar.edu
Director: Mary Marlino
Supports community and technical aspects of library construction and management for DLESE, a distributed community effort to improve the quality, quantity, and efficiency of teaching and learning about the Earth system at all levels by providing access to high-quality collections of online resources.

GLOBE

303-497-2641
www.globe.gov
Director: Craig Blurton
Involves hundreds of thousands of primary and secondary students around the world in partnership with scientists to collect data for research about Earth's environment. More than 24,000 teachers in 14,000 schools and over 100 countries have received GLOBE training.

Joint Office for Science Support (JOSS)

303-497-8683
www.joss.ucar.edu
Director: Karyn Sawyer
Provides scientific, technical, and administrative support services to the research community for planning, organizing, and implementing research programs and associated field projects worldwide. Most JOSS services and products fall into three broad categories: (1) community support, including planning advice, meeting management, program office administration, publications, and visitor programs; (2) field program support, including program planning and design, site surveys, and field operation logistics and management; and (3) data management, including system design and the collection, quality control, formatting, and customized delivery of scientific project data.

National Science Digital Library (NSDL)

303-497-8651
www.nsdl.ucar.edu
Director: Kaye Howe
Provides high-quality online materials for students, teachers, and professionals at all levels; serves as the digital library for NSF's science, technology, engineering, and mathematics (STEM) education programs. NSDL's core integration activities are housed in UOP; other parts of the NSF-funded effort are distributed at several partnering institutions.

Unidata Program Center

303-497-8643
www.unidata.ucar.edu
Director: Mohan Ramamurthy
Provides data, tools, and community leadership for enhanced Earth-system education and research. Unidata is a diverse community of academic institutions vested in the common goal of sharing data, as well as tools to access, analyze, and visualize those data.

Visiting Scientist Programs (VSP)

303-497-8627
www.vsp.ucar.edu
Director: Meg Austin
Operates programs designed to support and broaden education and research in the atmospheric, oceanic, and related sciences through fellowships to researchers at graduate, postgraduate, and more advanced levels. The VSP also supports advisory panels and review teams, workshops, and summer institutes for the university community and federal-agency sponsors.

OTHER UCAR ACTIVITIES

Office of the UCAR President

303-497-1650
www.ucar.edu/pres
President: Richard Anthes

Office of Development and Government Affairs

303-497-2102
www.ucar.edu/oga
Director: Cynthia Schmidt
Advocates for federal budgetary, legislative, and policy issues of importance to the UCAR community. Monitors the activities of the U.S. Congress and keeps the UCAR community informed on budgetary, legislative, and policy developments involving NSF, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the U.S. Department of Energy, and other agencies of importance to the atmospheric and related sciences. Communicates with Congress concerning the services provided to society through the UCAR community's research, research applications, education, and training activities. Promotes the growth and well-being of UCAR's programs and activities by supporting grant-seeking efforts in the public and private sectors.

Office of Education and Outreach

303-497-2591
www.eo.ucar.edu
Director: Roberta Johnson
Coordinates and carries out activities that further the UCAR goal of promoting scientific literacy and advancing all levels of education and training in subjects related to Earth's atmosphere. Activities are focused on facilitating learning across disciplines, with an emphasis on inquiry-based experiences for students, faculty, and the public that integrate research and education.

Significant Opportunities in Atmospheric Research and Science (SOARS®)

303-497-8623
www.ucar.edu/soars
Director: Rajul Pandya
Works to increase the diversity of students pursuing careers in the atmospheric and related sciences through a four-year undergraduate and graduate mentoring program and learning community. A central feature of SOARS is a ten-week summer research experience at NCAR and other national laboratories. SOARS was established by UCAR through partnership with NSF. Other program sponsors have included the U.S. Department of Energy, the National Oceanic and Atmospheric Administration, the Cooperative Institute for Research in Environmental Sciences, the National Aeronautics and Space Administration, and the UCAR university community.

UCAR Communications

303-497-8601
www.ucar.edu/news
Director: Lucy Warner
Provides news and information about UCAR, NCAR, and UOP activities to the UCAR community, journalists, and the public; serves as a resource for internal and external communication policies and practices.

UCAR Foundation

303-497-8898
www.ucar.edu/research/techtransfer
President: R.C. Mercure
Acts as UCAR's exclusive agent for commercial endeavors. The nonprofit UCAR Foundation includes officers and a board of directors drawn from UCAR, universities, and the private sector. Revenue flows to the foundation through equity positions, license fees, and royalties on the sale of resulting commercial products. A substantial portion of the revenue generated is returned to UCAR for the advancement of its scientific programs.

UCAR Governance Office

303-497-1658
www.ucar.edu/governance
Governance liaison: Susan Friberg
Administers the process by which UCAR member institutions, academic affiliates, and international affiliates govern UCAR research, service, and administrative activities through the UCAR Board of Trustees, Member Representatives, and their committees.