

Especially For...

- Staff (Inside UCAR)
- Research Community
- Students & Educators
- Governance
- Journalists
- Kids

QuickLinks

- Jobs & Opportunities
- People Search
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- Events
- Webcasts

News Feeds

Weather



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Watch a video about what we do:
Connections: weather, climate, and the UCAR research & education community. (QuickTime, 41MB, 7.5 minutes)

News



[World's Largest Tornado Experiment Heads for Great Plains](#)

[Water Levels Dropping in Some Major Rivers as Global Climate Changes](#)

[more news >](#)



[more People Spotlights >](#)

Site Spotlight

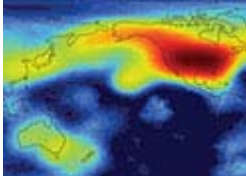


[Unidata Program Center](#)
 UCAR's Unidata program provides a broad array of geoscience data, analysis, and visualization tools to educators and the research community. [more >](#)

[more Site Spotlights >](#)



Feature Story



[Coding the atmosphere: The quest for nimble software](#)
 Given the complexities of Earth's atmosphere and the demands of high-performance computing, there are powerful incentives to make our weather, climate, and other computer models as agile and efficient as possible. NCAR is experimenting with novel ways to improve the software that drives so much of modern atmospheric and Earth system research. [more >](#)

[more Feature Stories >](#)

NCAR Research & Technology | UCAR Community Services
Climate Change & Data Services &

Global Warming

climates of the past, greenhouse effect & global warming, climate of the future, regional climate, El Niño & La Niña, drought and wildfires

Computer Modeling

community & developmental models of Earth system processes, Joint Numerical Testbed

High-Performance Computing & Cyberinfrastructure

supercomputing & mass storage, TeraGrid partnership, applied mathematics for geoscience, computational science, consulting & user support, data analysis & visualization

Data Sets

Community Data Portal, field expedition data catalog

Facilities & Instrumentation

instruments & observations, NCAR Library & Archives, Research Aviation Facility, community supercomputing, access grid & visualization lab, campuses & buildings

Meteorology & Weather Forecasting

from nowcasts to 48-hour forecasts, 1–10 days, long range, seasonal, physics of precipitation

Pollution & Atmospheric Chemistry

chemistry of the atmosphere, air pollution components, pollution's global reach, emission lifetimes & cycles, air chemistry & climate, "good" & "bad" ozone

Research Expeditions

observing the atmosphere, staging expeditions, after the field campaign

Software

access & management of atmospheric & Earth system data, display & analysis, community projects

GPS-Based Observing

Constellation Observing System for Meteorology, Ionosphere & Climate, COSMIC's Data Analysis and Archive Center, ground-based GPS for atmospheric & Earth system research, global GPS data on moisture and total electron content, NCAR GPS dropsonde development

Professional Training

operational meteorology classroom, distance learning, applied forecasting projects, international training

Resources for Students & Teachers

kids, educators, undergraduate & graduate students, science aficionados, international school-based projects, online resource development for the sciences, weather & climate basics, Digital Library for Earth System Education, National Science Digital Library, Windows to the Universe

Support for Community Projects

meeting planning, complex travel arrangements, publication creation, budget planning & reporting, special staffing, administrative support, specialized field logistics

Technology Transfer Services

Severe Storms

thunderstorms, hail, lightning, tornadoes, floods, hurricanes & typhoons, winter storms

Societal Impacts

people + climate + environment, coping with hazards, problem-solving tools, support for decision making

The Sun & Space Weather

solar radiation & solar constant, solar interior, solar atmosphere, solar storms, space weather, solar variation & Earth's climate, images of today's Sun

Technology Development & Transfer

aviation weather, hydrometeorology, Joint Numerical Testbed, national security, decision support & assessment

The Whole Earth System

climate ingredients, oceans + atmosphere, land + atmosphere, water cycle, cryosphere/ice

NCAR

Visitor Programs for Students, Postdocs & Scientists


Community Tools

- Applications
- Collaborations
- Data Sets
- Diversity
- Education
- Facilities
- Models
- Opportunities
- Publications
- Technology Transfer
- Webcasts

UCAR Office of Programs

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