MEDIA CONTACT:
Lynne Roeder, ARM Public Information Officer (509) 372-4331

For Immediate Release
DATE: August 17, 2004

TECHNICAL CONTACT:
Tom Ackerman, ARM Chief Scientist (509) 372-6032

PRESS RELEASE

U.S. Department of Energy's Atmospheric Radiation Measurement Program Achieves Milestone in Climate Modeling Research

A milestone for the global climate research community comes from a DOE research facility located in north-central Oklahoma. This year marks the 10-year anniversary of the world's largest and most extensive climate research field site for studying the effects of clouds and solar radiation on Earth's atmosphere.

"Our overarching scientific objective is to improve scientific understanding of the fundamental physics related to interactions between clouds and radiative processes in the atmosphere," said Wanda Ferrell, program director for the U.S. Department of Energy's Atmospheric Radiation Measurement (ARM) Program. "The data set provided by 10 years of continuous measurements represents a major contribution in research related to climate observations as well as for advancing climate modeling efforts going on around the world."

The Southern Great Plains (SGP) site was chosen for its relatively homogeneous geography and easy accessibility, wide variability of climate cloud type and surface flux properties, and large seasonal variation in temperature and specific humidity. It was the first of three heavily instrumented research locales established around the globe by the ARM Program. These three locales now make up the ARM Climate Research Facility, a national user facility for conducting climate research.

Scattered among approximately 55,000 square miles of mostly cattle pasture and wheat fields at the SGP site are more than 30 specialized in situ and remote-sensing instrument clusters for measuring surface and atmospheric properties. Data collected by these instruments provide continuous, detailed ground-based measurements about wind speed and direction, water vapor transport, temperature, cloud properties and distibution, radiation flux, and other parameters important to atmospheric research.

“Climate research is focused on long-term trends, both at the regional and global scale,” said Tom Ackerman, chief scientist for the ARM Program. “You can’t make any real progress with pieces of data from here and there. To truly understand what is happening over the long haul, you need data sets that provide continous measurements spanning long periods of time.”

Though the first set of instruments was installed in 1992, additional capabilities were added in the succeeding few years. The complete suite of permanent instruments at the SGP site provide a 10-year collection of unprecedented data for the scientific community as they investigate the causes and effects of global climate change.

# # #

Additional information about ARM Program Science and the ARM Climate Research Facility is available at www.arm.gov.