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Global Temperature Report: August 2009

Global climate trend since Nov. 16, 1978: +0.13 C per decade

August temperatures (preliminary)

Global composite temp.: +0.23 C (about 0.41 degrees Fahrenheit) above
20-year average for August.

Northern Hemisphere: +0.28 C (about 0.50 degrees Fahrenheit) above 20-year
average for August.

Southern Hemisphere: +0.18 C (about 0.32 degrees Fahrenheit) above 20-year
average for August.

July temperatures (revised):

Global Composite: +0.41 C above 20-year average

Northern Hemisphere: +0.21 C above 20-year average

Southern Hemisphere: +0.61 C above 20-year average

(All temperature variations are based on a 20-year average (1979-1998) for
the month reported.)

Notes on data released September 4, 2009:

The tropics continued to respond in August to warming caused by the El Niño Pacific Ocean warming event, with the average temperature in the tropics warming from 0.43 to 0.46 C warmer than season norms from July to August, according to Dr. John Christy, director of UAHuntsville's Earth System Science Center.

At the same time, non-tropical temperatures in the Southern Hemisphere plunged in August. Temperatures over the Antarctic continent dropped from 3.1 C (about 5.6° Fahrenheit) warmer than normal in July to 0.1 C cooler than normal in August.

Color maps of local temperature anomalies may soon be available on-line at:

http://nsstc.uah.edu/climate

The processed temperature data is available on-line at:

vortex.nsstc.uah.edu/data/msu/t2lt/uahncdc.lt

As part of an ongoing joint project between The University of Alabama in Huntsville, NOAA and NASA, Christy and Dr. Roy Spencer, a principal research scientist in the ESSC, use data gathered by microwave sounding units on NOAA and NASA satellites to get accurate temperature readings for almost all regions of the Earth. This includes remote desert, ocean and rain forest areas for which reliable climate data are not otherwise available.

The satellite-based instruments measure the temperature of the atmosphere from the surface up to an altitude of about eight kilometers above sea level. Once the monthly temperature data is collected and processed, it is placed in a "public" computer file for immediate access

by atmospheric
scientists in the U.S. and abroad.

Neither Spencer nor Christy receives any research support or funding from
oil, coal or industrial companies or organizations, or from any private or
special interest groups. All of their climate research funding comes from
state and federal grants or contracts.

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