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For Additional Information:

Dr. John Christy, (256) 961-7763

john.christy@nsstc.uah.edu

Dr. Roy Spencer, (256) 961-7960

roy.spencer@nsstc.uah.edu

Global Temperature Report: July 2014

Global climate trend since Nov. 16, 1978: +0.14 C per decade

July temperatures (preliminary)

Global composite temp.: +0.31 C (about 0.56 degrees Fahrenheit) above 30-year average for July.

Northern Hemisphere: +0.29 C (about 0.52 degrees Fahrenheit) above 30-year average for July.

Southern Hemisphere: +0.32 C (about 0.58 degrees Fahrenheit) above 30-year average for July.

Tropics: +0.45 C (about 0.81 degrees Fahrenheit) above 30-year average for July.

June temperatures (revised):

Global Composite: +0.31 C above 30-year average

Northern Hemisphere: +0.32 C above 30-year average

Southern Hemisphere: +0.30 C above 30-year average

Tropics: +0.51 C above 30-year average

(All temperature anomalies are based on a 30-year average (1981-2010) for the month reported.)

Notes on data released August 5, 2014:

In the tropics, July 2014 was the second warmest July in the 36-year satellite record, only 0.03 C cooler than July 2009 and 0.06 C warmer than July 1998, according to Dr. John Christy, a professor of atmospheric science and director of the Earth System Science Center at The University of Alabama in Huntsville. The average temperature in the tropics during July was 0.45 C (about 0.81° F) warmer than seasonal norms for the month.

The global average temperature for July was 0.31 C (about 0.56 degrees Fahrenheit) warmer than seasonal norms, the fifth warmest July in the satellite record.

Compared to seasonal norms, the coldest place in Earth's atmosphere in July was over western Russia near the town of Verkhoturys (one of the oldest Russian towns east of the Urals), where Antarctic winter temperatures were as much as 3.77 C (about 6.79 degrees Fahrenheit) colder than seasonal norms. Compared to seasonal norms, the warmest departure from average in July was in northern Norway near the town of Borkenes. Temperatures there were as much as 2.93 C (about 5.27 degrees Fahrenheit) warmer than seasonal norms.

Archived color maps of local temperature anomalies are available on-line at:

<http://nsstc.uah.edu/climate/>

As part of an ongoing joint project between UAHuntsville, NOAA and NASA, Christy and Dr. Roy Spencer, an ESSC principal scientist, use data gathered by advanced 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 where 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 Christy nor Spencer 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 federal and state grants or contracts.

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