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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: June 2016

June 2016 was 2nd warmest June in satellite record

Global climate trend since Nov. 16, 1978: +0.12 C per decade

June temperatures (preliminary)

Global composite temp.: +0.34 C (about 0.61 degrees Fahrenheit) above 30-year average for June.

Northern Hemisphere: +0.51 C (about 0.92 degrees Fahrenheit) above 30-year average for June.

Southern Hemisphere: +0.17 C (about 0.79 degrees Fahrenheit) above 30-year average for June.

Tropics: +.38 C (about 0.68 degrees Fahrenheit) above 30-year average for June.

May temperatures (revised):

Global Composite: +0.55 C above 30-year average

Northern Hemisphere: +0.65 C above 30-year average

Southern Hemisphere: +0.44 C above 30-year average

Tropics: +0.72 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 June 2, 2016:

Although global temperatures fell rapidly from May to June as the El Niño Pacific Ocean warming event fades (see attached graph), June 2016 was nonetheless the second warmest June in the satellite temperature record, trailing June 1998 by 0.23 C, according to Dr. John Christy, director of the Earth System Science Center at The University of Alabama in Huntsville. Compared to seasonal norms, however, June 2016 was the 30th warmest month overall since the satellite temperature dataset began in December 1978.

June 2016 also was the second warmest on record in the Northern Hemisphere (0.51 C compared to June 1998 at 0.60 C above seasonal norms), but the eighth warmest June in the Southern Hemisphere and, despite the El Niño remnants, only the sixth warmest June in the tropics.

Compared to seasonal norms, the warmest average temperature anomaly on Earth in June was in the eastern Antarctic, south of the Zhongshan station. June temperatures there averaged 4.24 C (about 7.63 degrees F) warmer than seasonal norms. Compared to seasonal norms, the coolest average temperature on Earth in June was in northeastern Russia, near the town of Vayegi, where the average June 2016 temperature was 3.40 C (about 6.12 degrees F) cooler than normal for June.

The complete version 6 beta lower troposphere dataset is available here:

http://vortex.nsstc.uah.edu/data/msu/v6.0beta/tlt/uahncdc_lt_6.0beta5.txt

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 are collected and processed, they are 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.