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Global Temperature Report: October 2014

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

October temperatures (preliminary)

Global composite temp.: +0.37 C (about 0.67 degrees Fahrenheit) above 30-year average for October.

Northern Hemisphere: +0.34 C (about 0.61 degrees Fahrenheit) above 30-year average for October.

Southern Hemisphere: +0.40 C (about 0.72 degrees Fahrenheit) above 30-year average for October.

Tropics: +0.19 C (about 0.34 degrees Fahrenheit) above 30-year average for October.

September temperatures (revised):

Global Composite: +0.29 C above 30-year average

Northern Hemisphere: +0.19 C above 30-year average

Southern Hemisphere: +0.40 C above 30-year average

Tropics: +0.19 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 Nov. 4, 2014:

October 2014 tied as the warmest October in the 36-year global satellite temperature record, 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. With a global average temperature that was 0.37 C (about 0.67 degrees Fahrenheit) warmer than seasonal norms, October 2014 tied October 2012.

Warmest Octobers (1979-2014)

(Warmer than seasonal norms)

1. 2014 +0.37 C
- 2012 +0.37 C
3. 2005 +0.36 C
4. 2006 +0.32 C
5. 2003 +0.30 C
- 2010 +0.30 C
6. 1998 +0.29 C
- 2013 +0.29 C
8. 2009 +0.27 C
9. 2004 +0.25 C
10. 2007 +0.19 C

Compared to seasonal norms, the coldest place in Earth's atmosphere in October was in south central Russia, just north of Omsk, where temperatures were as much as 3.39 C (about 6.10 degrees Fahrenheit) colder than seasonal norms. Compared to seasonal norms, the warmest departure from average in October was along the western edge of Newfoundland and Labrador, north of Labrador City. Temperatures there were as much as 3.72 C (about 6.70 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.