

Nov. 5, 2013

Vol. 23, No. 7

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Global Temperature Report: October 2013

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

October temperatures (preliminary)

Global composite temp.: +0.22 C (about 0.40 degrees Fahrenheit) above 30-year average for October.

Northern Hemisphere: +0.23 C (about 0.41 degrees Fahrenheit) above 30-year average for October.

Southern Hemisphere: +0.22 C (about 0.40 degrees Fahrenheit) above 30-year average for October.

Tropics: +0.04 C (about 0.07 degrees Fahrenheit) above 30-year average for October.

September temperatures (revised):

Global Composite: +0.37 C above 30-year average

Northern Hemisphere: +0.34 C above 30-year average

Southern Hemisphere: +0.39 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. 5, 2013:

In October the atmosphere saw a general cooling relative to September, 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. Temperatures over the tropics fell back to near normal, which is consistent with a neutral year where there is neither an El Niño Pacific Ocean warming event nor a La Niña cooling event.

Compared to seasonal norms, in October the warmest area on the globe was in the Gulf of Alaska near Juneau, where the average temperature for the month was 3.93 C (more than 7 degrees F) warmer than seasonal norms. The coolest area was in the Kara Sea north of Russia, where tropospheric temperatures were 2.59 C (about 4.66 degrees F) cooler 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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