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Global Temperature Report: January 2015

Northern non-tropics see warmest January

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

January temperatures (preliminary)

Global composite temp.: +0.35 C (about 0.63 degrees Fahrenheit) above 30-year average for January.

Northern Hemisphere: +0.55 C (about 0.99 degrees Fahrenheit) above 30-year average for January.

Southern Hemisphere: +0.15 C (about 0.27 degrees Fahrenheit) above 30-year average for January.

Tropics: +0.13 C (about 0.23 degrees Fahrenheit) above 30-year average for January.

December temperatures (revised):

Global Composite: +0.32 C above 30-year average

Northern Hemisphere: +0.47 C above 30-year average

Southern Hemisphere: +0.18 C above 30-year average

Tropics: +0.30 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 Feb. 3, 2015:

The northern portion of the globe saw its warmest January in the 36-year satellite record last month, 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. "A large band of warmer than normal air stretched from China, and across the northern Pacific into western Canada and the western third of the U.S., which brought warm temperatures to the western U.S. and dry air to California. This was somewhat offset by the large area of much cooler than normal air that stretched from the eastern U.S. through Hudson Bay into the Arctic."

Northern Extratropics

Top 5 Warmest Januaries

(20° to 85° N. Latitude)

2015 + 0.80 C

2010 + 0.70 C

2007 + 0.67 C

2014 + 0.62 C
2009 + 0.58 C

Compared to seasonal norms, the warmest average temperature anomaly on Earth was off the west coast of the U.S. near Eugene, Oregon. The January temperature there was 4.03 C (about 7.25 degrees F) warmer than seasonal norms.

The northern extratropics (the non-tropical northern region) extends from 20 degrees to 85 degrees north latitude, or from about the latitude of Mexico City and the island of Hawai'i to a latitude a couple of degrees north of an island off the northern tip of Greenland — the northernmost tip of land on Earth.

At the same time, the anticipated El Niño Pacific Ocean warming event seems to be beginning to fizzle, with the warm temperature anomaly in the tropics falling 0.17 C — from +0.30 C in December to +0.13 C in January.

Compared to seasonal norms, the coolest average temperature on Earth in January was over southern Baffin Island, by Canada's Auyuittuq National Park. The average January 2015 temperature there was +3.59 C (about 6.46 degrees F) cooler than normal.

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

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

Anyone accessing the satellite temperature anomaly dataset through the website should be aware that a problem in the code creating the USA49 column of numbers has been identified and corrected, changing the values reported for that column alone.

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.