

March 5, 2014

Vol. 23, No. 11

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## **Global Temperature Report: February 2014**

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

February temperatures (preliminary)

Global composite temp.: +0.17 C (about 0.31 degrees Fahrenheit) above 30-year average for February.

Northern Hemisphere: +0.33 C (about 0.59 degrees Fahrenheit) above 30-year average for February.

Southern Hemisphere: +0.02 C (about 0.04 degrees Fahrenheit) above 30-year average for February.

Tropics: -0.10 C (about 0.18 degrees Fahrenheit) below 30-year average for February.

January temperatures (revised):

Global Composite: +0.29 C above 30-year average

Northern Hemisphere: +0.39 C above 30-year average

Southern Hemisphere: +0.19 C above 30-year average

Tropics: -0.03 C below 30-year average

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

### **Notes on data released March 5, 2014:**

Warm temperature anomalies in the Arctic during February indicate a displacement of cold air from that region to other areas, such as from North America through the North Atlantic into eastern Russia, 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.

Compared to seasonal norms, the coldest place in Earth's atmosphere in February was over the southwestern corner of Canada's Saskatchewan province near the town of Eston, where temperatures were as much as 4.68 C (about 8.42 degrees Fahrenheit) cooler than seasonal norms. With Arctic air holding sway over much of North America, temperatures in the Arctic were generally warmer than normal in February. Compared to seasonal norms, the warmest departure from average in February was over the Arctic Ocean northeast of Svalbard, a group of islands about halfway between Norway and the North Pole. Temperatures there were as much as 6.16 C (11.1 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.