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Global Temperature Report: January 2017

Tropics cool in January; globe doesn't

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

January temperatures (preliminary)

Global composite temp.: +0.30 C (about 0.54 degrees Fahrenheit) above 30-year average for January.

Northern Hemisphere: +0.27 C (about 0.49 degrees Fahrenheit) above 30-year average for January.

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

Tropics: +0.07 C (about 0.13 degrees Fahrenheit) above 30-

year average for January.

December temperatures (revised):

Global Composite: +0.24 C above 30-year average

Northern Hemisphere: +0.19 C above 30-year average

Southern Hemisphere: +0.30 C above 30-year average

Tropics: +0.21 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. 1, 2017:

Temperatures in the tropical atmosphere continued to drop in January as temperatures there moved closer to their long-term averages, according to Dr. John Christy, director of the Earth System Science Center at The University of Alabama in Huntsville. Composite temperatures over both hemispheres, however, bumped slightly warmer in January, especially in the higher latitudes. In the Northern Hemisphere, pockets of warmer than normal air were especially pronounced over the eastern U.S., Canada and the North Atlantic. In the Southern Hemisphere, Australia and a large area of southern ocean between South America and New Zealand were warmer than normal.

Compared to seasonal norms, the warmest average temperature anomaly on Earth in January was in the southern Indian Ocean about 1,000 miles north of the Getz ice shelf in Western Antarctica. January temperatures there averaged 4.98 C (about 8.96 degrees F) warmer than seasonal norms. Compared to seasonal norms, the coolest

average temperature on Earth in January was off the east coast of Tunisia in the Gulf of Hammamet. January temperatures there averaged 2.91 C (about 5.24 degrees F) cooler than seasonal norms.

The complete version 6 lower troposphere dataset is available here:

http://www.nsstc.uah.edu/data/msu/v6.0/tlt/uahncdc_lt_6.0.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 UAH, 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.