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Global Temperature Report: January 2018

Temperatures fall as La Niña's effects are felt

Global climate trend since Nov. 16, 1978: +0.13 C per decade

January temperatures (preliminary)

Global composite temp.: +0.26 C (about 0.47 degrees Fahrenheit) above 30-year average for January.

Northern Hemisphere: +0.46 C (about 0.83 degrees Fahrenheit) above 30-year average for January.

Southern Hemisphere: +0.06 C (about 0.11 degrees Fahrenheit) above 30-year average for January.

Tropics: - 0.12 C (about 0.22 degrees Fahrenheit) below 30-year average for January.

December temperatures (revised):

Global Composite: +0.41 C above 30-year average

Northern Hemisphere: +0.50 C above 30-year average

Southern Hemisphere: +0.33 C above 30-year average

Tropics: +0.26 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, 2018:

A La Niña equatorial Pacific Ocean cooling event is making itself felt in the atmosphere, dropping average temperatures in the tropics to their lowest point since June 2012 (-0.15 C), and temperatures in the Southern Hemisphere (+0.06 C) to their coolest since April 2015 (-0.01 C), according to Dr. John Christy, director of the Earth System Science Center (ESSC) at The University of Alabama in Huntsville.

The drop in tropical temperatures (0.38 C) from December to January tied for the third largest one-month drop in the 470 months of satellite temperature data. The largest was 0.51 C from September to October 1991, which followed the eruption of the Mount Pinatubo volcano in the Philippines. The second largest (0.41 C) was from July to August 2014.

Compared to seasonal norms, the coldest spot on the globe in January was near the Tsambagarav-Uul National Park, in eastern Mongolia. Temperatures there were 3.22 C (about 5.80 degrees Fahrenheit) cooler than seasonal norms.

Compared to seasonal norms, the warmest place on Earth in January was near Wrangel Island, in the East Siberian Sea. Tropospheric temperatures there averaged 4.75 C (about 8.55 degrees Fahrenheit) warmer than seasonal norms.

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.

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/>

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