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Global Temperature Report: April 2015

25th year of GTR begins with revised satellite dataset

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

April temperatures (preliminary)

Global composite temp.: +0.16 C (about 0.29 degrees Fahrenheit) above 30-year average for April.

Northern Hemisphere: +0.34 C (about 0.61 degrees Fahrenheit) above 30-year average for April.

Southern Hemisphere: -0.01 C (about 0.02 degrees Fahrenheit) below 30-year average for April.

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

year average for April.

March temperatures (revised):

Global Composite: +0.26 C above 30-year average

Northern Hemisphere: +0.41 C above 30-year average

Southern Hemisphere: +0.11 C above 30-year average

Tropics: +0.08 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 May 4, 2015:

"After three years of work, we have (hopefully) finished our Version 6.0 reanalysis of the global MSU/AMSU data," said Dr. John Christy, director of the Earth System Science Center at The University of Alabama in Huntsville. "Many procedures have been modified, or completely reworked, and most of the software has been rewritten from scratch. Version 6 of the UAH MSU/AMSU global satellite temperature dataset is by far the most extensive revision of the procedures and computer code we have produced in more than 25 years of global temperature monitoring.

"The two most significant changes from an end user perspective are (1) a decrease in the global-average lower troposphere (LT) temperature trend from +0.14 C per decade to +0.114 C per decade from December 1978 through March 2015; and (2) the geographic distribution of the LT trends, including higher spatial resolution," Christy said. "Barring a significant problem, these revised data will be incorporated into the May 2015 Global Temperature

Report.”

The beta-test files of Version 6 have been released for review and comments.

A more thorough explanation of the dataset revision process is available here:

<http://www.drroyspencer.com/wp-content/uploads/Version-61.pdf>

The complete December 1978 through April 2015 version 6 beta lower troposphere dataset is available here:

http://vortex.nsstc.uah.edu/data/msu/v6.0beta/tlt/uahncdc_lt_6.0beta2

Compared to seasonal norms, the warmest average temperature anomaly on Earth in April was around the Kara Sea, north of central Russia. The April temperature there averaged 5.85 C (about 10.53 degrees F) warmer than seasonal norms. Compared to seasonal norms, the coolest average temperature on Earth in April was in Marie Byrd Land in West Antarctica, where the average April 2015 temperature was 3.07 C (about 5.53 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.