Nov. 12, 2009

Vol. 19, No. 6

For Additional Information:
Dr. John Christy, UAH, (256) 961-7763
john.christy@nsstc.uah.edu
Dr. Roy Spencer, UAH, (256) 961-7960
roy.spencer@nsstc.uah.edu

Global Temperature Report: October 2009

Second warmest October in the tropics;
2nd coolest Oct. in continental states

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

October temperatures (preliminary)

Global composite temp.: +0.28 C (about 0.50 degrees Fahrenheit) above 20-year average for October.

Northern Hemisphere: +0.27 C (about 0.49 degrees Fahrenheit) above 20-year average for October.

Southern Hemisphere: +0.30 C (about 0.54 degrees Fahrenheit) above 20-year average for September.

September temperatures (revised):

Global Composite: +0.42 C above 20-year average

Northern Hemisphere: +0.55 C above 20-year average

Southern Hemisphere: +0.29 C above 20-year average

(All temperature variations are based on a 20-year average (1979-1998) for the month reported.)

Notes on data released October 12, 2009:

An El Nino Pacific Ocean warming event that caused the second warmest tropical October in 31 years didn't stop the continental U.S. from seeing its second coldest October in that same time, according to Dr. John Christy, professor of atmospheric science and director of the Earth System Science Center at The University of Alabama in Huntsville. The National Oceanic and Atmospheric Administration reported that October 2009 was the third coldest October in the continental U.S. since 1895.

The only October in the past 31 that was warmer in the tropics than last month was October 1987, when the average temperature in the tropics was 0.53 C (about 0.95 degrees Fahrenheit) warmer than seasonal norms. The October 2009 average temperature in the tropics was 0.33 C (about 0.6 degree Fahrenheit) warmer than seasonal norms.

At the same time, the average temperature over the 48 contiguous states was 1.45 C (about 2.61 degrees Fahrenheit) cooler than seasonal norms for October. The coldest October in the past 31 was in 2002, when average temperatures dropped 1.48 C (about 2.66 degrees Fahrenheit) below normal. By comparison, the next coldest October was in 2006, when temperatures in the continental U.S. were only 0.8 C cooler than normal.

Color maps of local temperature anomalies may soon be available on-line at:

http://climate.uah.edu/

The processed temperature data is available on-line at:

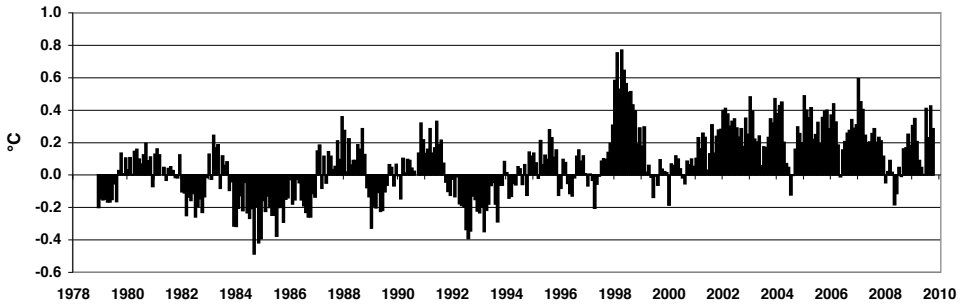
vortex.nsstc.uah.edu/data/msu/t2lt/uahncdc.lt

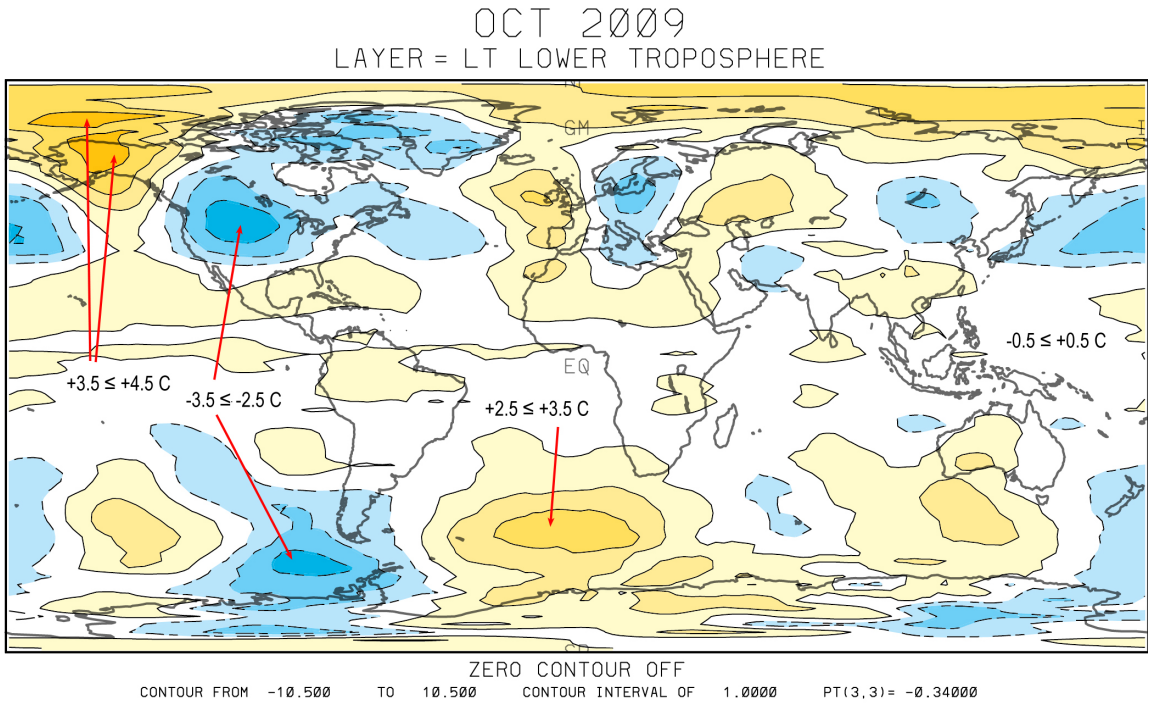
As part of an ongoing joint project between The University of Alabama in Huntsville, NOAA and NASA, Christy and Dr. Roy Spencer, a principal research scientist in the ESSC, use data gathered by microwave sounding units on NOAA and NASA satellites to get accurate temperature readings for almost all regions of the Earth. This includes remote desert, ocean and rain forest areas for which 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 Spencer nor Christy 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 state and federal grants or contracts.

Global Lower Troposphere





Broken lines outlines areas that were cooler than seasonal norms; solid lines outline areas that were warmer than seasonal norms. Each contour represents one degree Celsius, starting at -0.5 and +0.5 degrees C.