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Global Temperature Report: December 2008

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

December temperatures (preliminary)

Global composite temp.: +0.18 C (about 0.32 degrees Fahrenheit) above 20-year average for December.

Northern Hemisphere: +0.41 C (about 0.74 degrees Fahrenheit) above 20-year average for December.

Southern Hemisphere: -0.05 C (about 0.09 degrees Fahrenheit) below 20-year average for December.

November temperatures (revised):

Global Composite: +0.25 C above 20-year average

Northern Hemisphere: +0.34 C above 20-year average

Southern Hemisphere: +0.16 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 Jan. 12, 2009:

The eleventh warmest global December in 31 years was also the fifth warmest in the Northern Hemisphere, according to Dr. John Christy, a professor of atmospheric science and director of the Earth System Science Center (ESSC)

at The University of Alabama in Huntsville. At the same time, the Southern Hemisphere saw its tenth coolest of the past 31 Decembers.

WARMEST DECEMBERS, NH

2003	+0.62 C
2006	+0.54 C
1987	+0.52 C
1998	+0.42 C
2008	+0.41 C
2005	+0.40 C

Since November 1978, the Northern Hemisphere atmosphere has warmed more than three times as fast as the Southern Hemisphere atmosphere (+0.19 C to +0.06 C per decade).

With a global average temperature that was 0.05 C warmer than seasonal norms, 2008 goes into the books as the coolest year since 2000. Global temperatures during 2008 were influenced by a La Nina Pacific Ocean cooling event.

Another La Nina appears to be forming in the Pacific, which could chill temperatures through 2009.

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

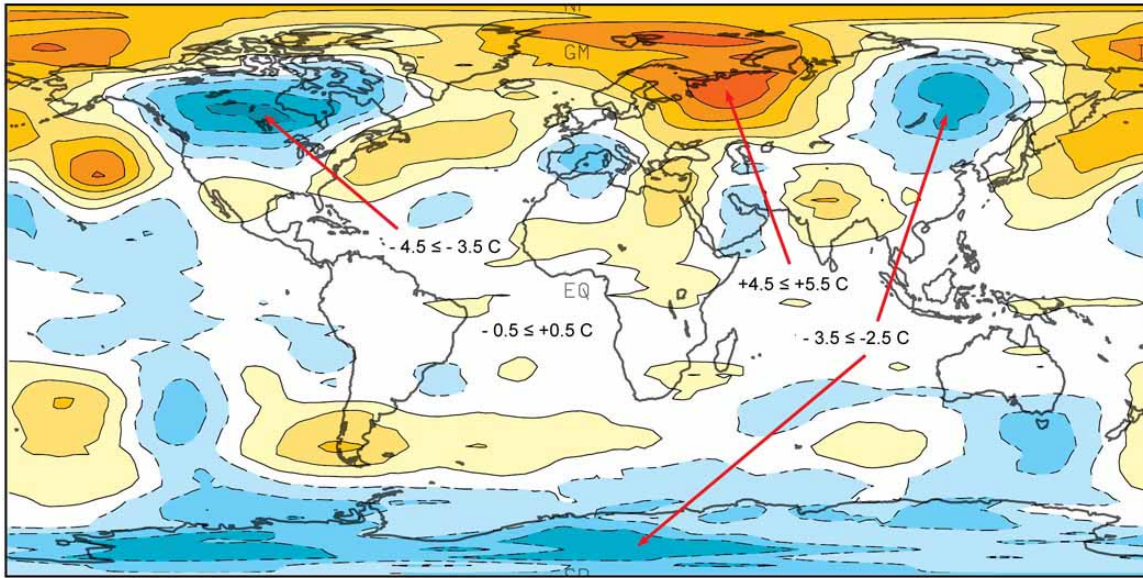
in a "public" computer file for immediate access by atmospheric scientists in the U.S. and abroad.

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.

AVE. GLOBAL TEMPERATURE
ANOMALIES, ANNUAL

1998	+ 0.51
2005	+ 0.34
2002	+ 0.31
2007	+ 0.28
2003	+ 0.27
2006	+ 0.26
2001	+ 0.20
2004	+ 0.19
1991	+ 0.12
1987	+ 0.11
1988	+ 0.11
1995	+ 0.11
1980	+ 0.09
1990	+ 0.07
1981	+ 0.05
1997	+ 0.05
2008	+ 0.05
1983	+ 0.04
1999	+ 0.04
2000	+ 0.03
1992	+ 0.02
1994	- 0.01
1979	- 0.07
1989	- 0.11
1982	- 0.15
1986	- 0.15
1993	- 0.15
1992	- 0.19
1985	- 0.21
1984	- 0.26

DEC 2008
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF
CONTOUR FROM -10.500 TO 10.500 CONTOUR INTERVAL OF 1.0000 PT(3,3)= -2.0400

Broken lines outline 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.

Global Lower Troposphere

