

Global Temperature Report, Dec. '09

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Global Temperature Report: December 2009

2009 was 7th warmest
of the past 31 years

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

December temperatures (preliminary)

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

Northern Hemisphere: +0.32 C (about 0.58 degrees Fahrenheit) above 20-year
average for December.

Southern Hemisphere: +0.24 C (about 0.43 degrees Fahrenheit) above
20-year average for December.

November temperatures (revised):

Global Composite: +0.50 C above 20-year average

Northern Hemisphere: +0.42 C above 20-year average

Southern Hemisphere: +0.57 C above 20-year average

(All temperature anomalies are based on a 20-year average (1979-1998) for

the month reported.)

Notes on data released Jan. 6, 2009:

An El Nino Pacific Ocean warming event kept global temperatures warmer than seasonal norms through December, with temperatures in the tropics a full 0.50 C (0.9 degrees Fahrenheit) warmer than seasonal norms, according to Dr. John Christy, professor of atmospheric science and director of the Earth System Science Center (ESSC) at The University of Alabama in Huntsville.

Powered by the El Nino, temperatures throughout 2009 were warmer than seasonal norms, making it the seventh warmest year in the 31-year satellite-based temperature record.

Year	Temp Anomaly
1. 1998	+0.512 C
2. 2005	+0.338 C
3. 2002	+0.311 C
4. 2007	+0.282 C
5. 2003	+0.275 C
6. 2006	+0.260 C
7. 2009	+0.259 C
8. 2001	+0.198 C
9. 2004	+0.193 C
10. 1991	+0.117 C

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

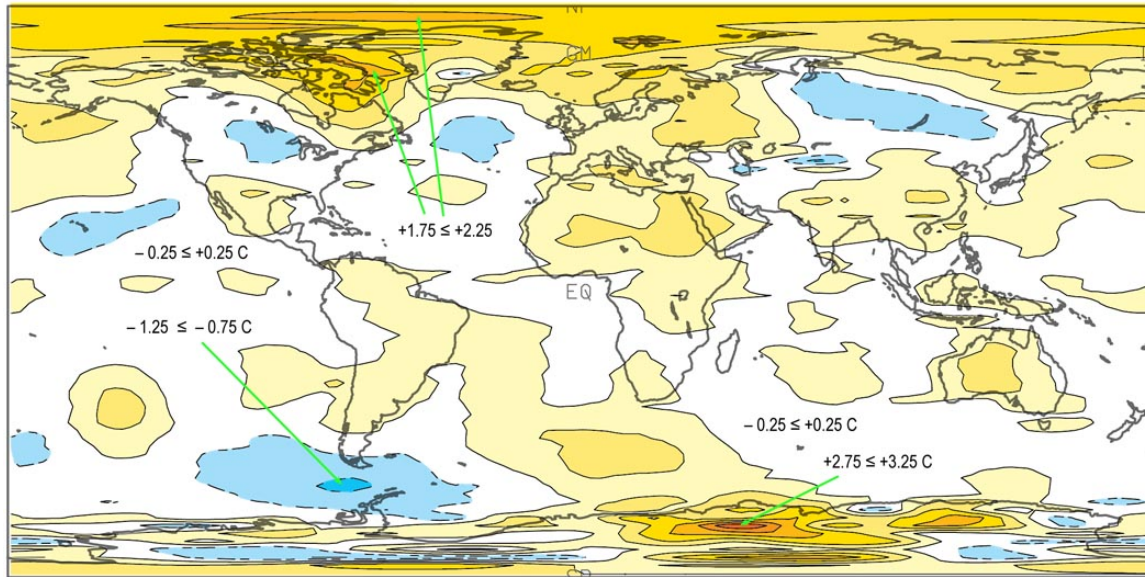
As part of an ongoing joint project between UAHuntsville, NOAA and NASA, Christy and Dr. Roy Spencer, a principal research scientist in the ESSC, use data gathered by microwave sounding units on NOAA and NASA satellites to get accurate temperature readings for almost all regions of the Earth. This includes remote desert, ocean and rain forest areas 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.

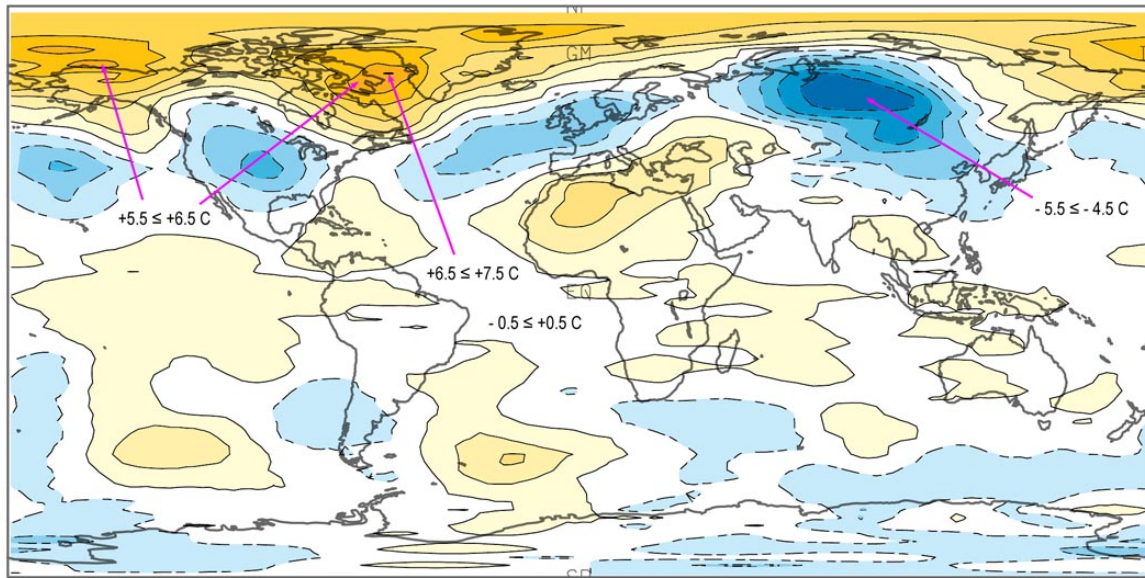
PERIOD AVERAGE : 200901 - 200912
LAYER = LT LOWER TROPOSPHERE



CONTOUR FROM -3.7500 TO 3.7500 CONTOUR INTERVAL OF 0.50000 PT(3,3)= 0.24639

Broken black lines outline areas that were cooler than seasonal norms; solid black lines outline areas that were warmer than seasonal norms. Each contour represents one-half (0.5) degrees Celsius, starting at -0.25 and +0.25 degrees C.

DEC 2009
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF
CONTOUR FROM -10.500 TO 10.500 CONTOUR INTERVAL OF 1.0000 PT(3,3) = -0.86000

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.