

## Global Temperature Report: November 2007

### Global Lower Troposphere

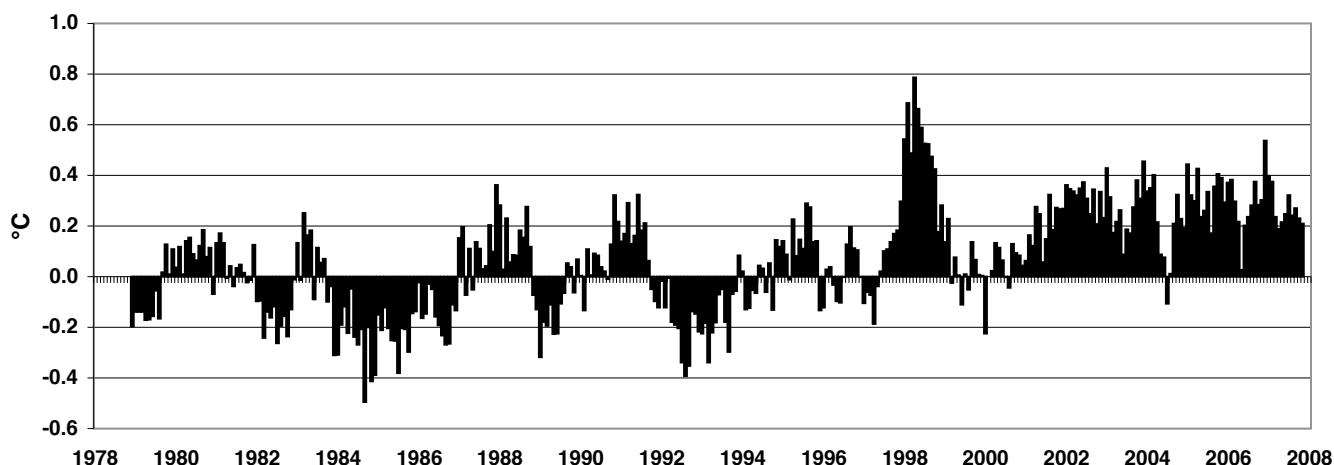


Fig. 1: Global variation from seasonal norms, in Celsius; Trend since Nov. 16, 1978: +0.14 C per decade

Global composite temp.: +0.21 C (about 0.38° Fahrenheit) above 20-year average for November.

Northern Hemisphere: +0.13 C (about 0.23° Fahrenheit) above 20-year average for November.

Southern Hemisphere: +0.29 C (about 0.52° Fahrenheit) above 20-year average for November.

October temperatures (revised): Global Composite: +0.23 C above 20-year average

Northern Hemisphere: +0.18 C above 20-year average

Southern Hemisphere: +0.28 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 Dec. 20, 2007:

With an annual global average temperature that was slightly less than 0.3 C (0.54° F) warmer than seasonal norms, 2007 will likely go into the books as the fourth warmest year among the past 39, accord-

ing 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 (UAH).

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### Twelve-month Running Mean Temperatures

Year	Mth	Global	NH	SH
1998	12	0.512	0.617	0.408
2005	12	0.328	0.434	0.222
2002	12	0.314	0.329	0.299
2007	11	0.294	0.390	0.198
2006	12	0.276	0.402	0.150
2003	12	0.272	0.388	0.157
2001	12	0.200	0.281	0.120
2004	12	0.193	0.284	0.101
1991	12	0.117	0.178	0.057
1995	12	0.110	0.208	0.013
1987	12	0.110	0.124	0.095
1988	12	0.110	0.138	0.081
1980	12	0.089	-0.002	0.180
1990	12	0.075	0.128	0.023
1981	12	0.053	0.051	0.054
1997	12	0.048	0.085	0.011
1999	12	0.040	0.199	-0.119
1983	12	0.036	-0.025	0.098
2000	12	0.035	0.117	-0.047
1996	12	0.021	0.008	0.033
1994	12	-0.011	0.092	-0.115
1979	12	-0.073	-0.088	-0.057
1989	12	-0.110	-0.084	-0.135
1986	12	-0.147	-0.201	-0.092
1993	12	-0.148	-0.155	-0.141
1982	12	-0.153	-0.255	-0.052
1992	12	-0.192	-0.235	-0.148
1985	12	-0.212	-0.276	-0.148
1984	12	-0.256	-0.343	-0.169

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/ltglhmam\\_5.2](http://vortex.nsstc.uah.edu/data/msu/t2lt/ltglhmam_5.2)

As part of an ongoing joint project between UAH and NOAA, Christy and Dr. Roy Spencer, a principal research scientist in the ESSC, use data gathered by microwave sounding units on NOAA satellites to get accurate temperature readings for almost all regions of the Earth.

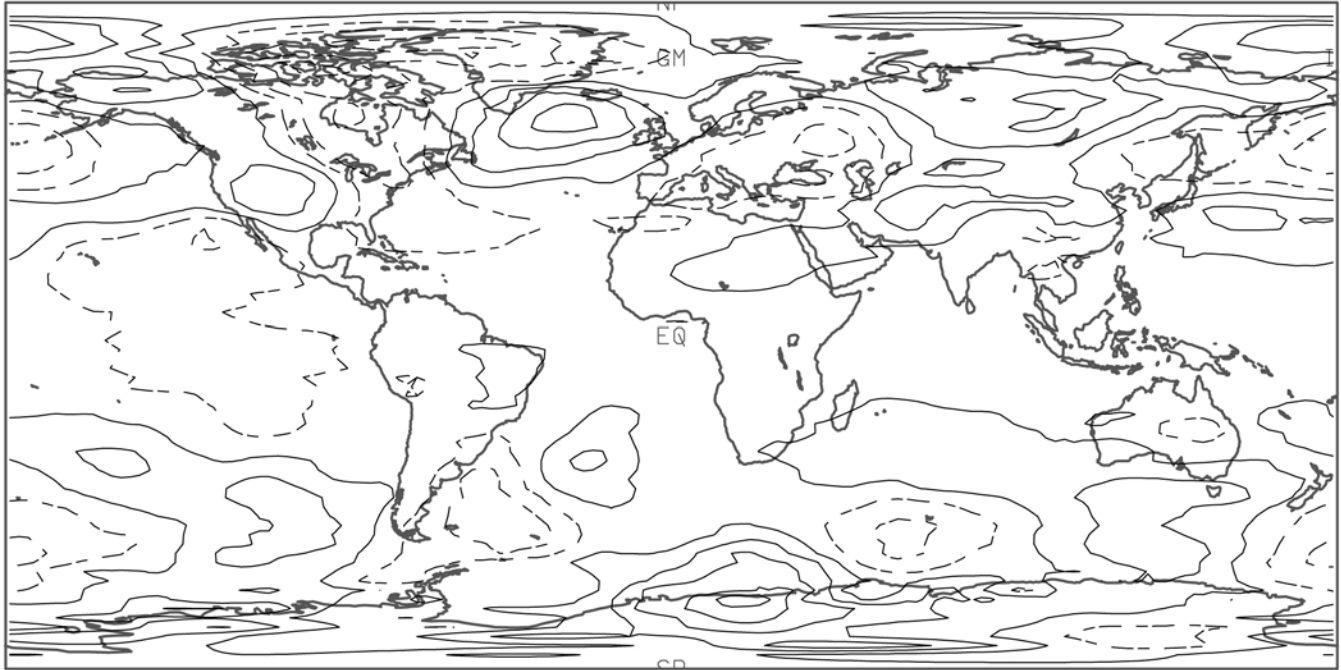
This includes remote desert, ocean and rain forest areas for which reliable climate data are not otherwise available. The satellite-based instruments measure the temperature of the atmosphere from the surface up to an altitude of about eight kilometers above sea level.

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.*

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NOV 2007  
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF  
CONTOUR FROM -10.500 TO 10.500 CONTOUR INTERVAL OF 1.0000 PT(3,3)= 1.1600

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