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Global Temperature Report: September 2011

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

September temperatures (preliminary)

Global composite temp.: +0.29 C (about 0.52 degrees Fahrenheit) above 30-year average for September.

Northern Hemisphere: +0.31 C (about 0.56 degrees Fahrenheit) above 30-year average for September.

Southern Hemisphere: +0.27 C (about 0.49 degrees Fahrenheit) above 30-year average for September.

Tropics: +0.18 C (about 0.32 degrees Fahrenheit) above 30-year average for September.

August temperatures (revised):

Global Composite: +0.33 C above 30-year average

Northern Hemisphere: +0.32 C above 30-year average

Southern Hemisphere: +0.33 C above 30-year average

Tropics: +0.16 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 Oct 5, 2011:

September 2011 was the fifth warmest September in the past 34 years — fifth warmest globally and in both hemispheres, according to Dr. John Christy, a professor of atmospheric science and director of the Earth System Science Center at The University of Alabama in Huntsville.

Although last winter's La Niña Pacific Ocean cooling event has faded and a new one appears to be forming, the tropics continue to be warmer than seasonal norms: Last month was the seventh warmest September in the tropics.

Warmest Septembers, Global
Temperature Anomalies
(degrees Celsius)

1.	2010	0.48
2.	2009	0.38
3.	1998	0.34
4.	2005	0.32
5.	2011	0.29
6.	2002	0.24
7.	2006	0.24
8.	2003	0.19
9.	1988	0.16
10.	2007	0.14

Northern Hemisphere
September Temp Anomalies
Warmer Than Norms

1.	2009	0.45
2.	1998	0.43
3.	2010	0.41
4.	2005	0.32
5.	2011	0.31
6.	2006	0.30
7.	2003	0.27
8.	1988	0.16
9.	2007	0.16
10.	1995	0.16

Southern Hemisphere
September Temp Anomalies
Warmer Than Norms

1.	2010	0.55
2.	2002	0.34
3.	2005	0.32
4.	2009	0.31
5.	2011	0.27
6.	1998	0.24
7.	1980	0.23
8.	1996	0.19
9.	2006	0.18
10.	1988	0.16

Tropics, Temp Anomalies
Warmest Septembers

1.	2009	0.55
2.	1987	0.38
3.	1997	0.36
4.	2005	0.28
5.	1998	0.26
6.	2010	0.22
7.	2011	0.18
8.	2002	0.15
9.	1995	0.15
10.	2006	0.11

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

<http://nsstc.uah.edu/climate/>

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 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.