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Global Temperature Report: April 2010

Second warmest April on record
is warmest month in the Arctic

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

April temperatures (preliminary)

Global composite temp.: +0.50 C (about 0.9 degrees Fahrenheit) above
20-year average for April.

Northern Hemisphere: +0.80 C (about 1.44 degrees Fahrenheit) above 20-year
average for April.

Southern Hemisphere: +0.21 C (about 0.38 degrees Fahrenheit) above 20-year
average for April.

Tropics: +0.63 C (about 1.34 degrees Fahrenheit) above 20-year average for
April.

March temperatures (revised):

Global Composite: +0.66 C above 20-year average

Northern Hemisphere: +0.85 C above 20-year average

Southern Hemisphere: +0.46 C above 20-year average

Tropics: +73 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 May 6, 2010:

The El Nino Pacific Ocean warming event might be fading but temperatures in the Arctic hit record highs in April, 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.

April's record high (averaging +2.46 C, about +4.43 degrees Fahrenheit, warmer than seasonal norms) caps the Arctic's warmest five-month period in the satellite temperature record. From December 2009 through April, temperatures in the Arctic averaged 2.07 C warmer than seasonal norms.

November 2005 through March 2006 was the second warmest such period, with average temperatures that were 1.73 C warmer than seasonal norms.

Warmer than normal temperatures have become the norm in the Arctic: There have been only three months in the past decade when average temperatures were cooler than seasonal norms from latitude 60 N (about even with Helsinki and the southern tip of Greenland) to the North Pole.

Globally, April 2010 was the second warmest April in the 32-year satellite temperature record, behind only April 1998 (+0.76 C). The first four months of 2010 were the second warmest start of a year, also trailing 1998.

GLOBAL ANOMALIES

	Year	Mo	C
1.	1998	2	+0.76
2.	1998	4	+0.76
3.*	2010	3	+0.66
4.	1998	5	+0.65
5.*	2010	1	+0.64
6.*	2010	2	+0.61
7.	1998	1	+0.58
8.	1998	6	+0.57
9.	1998	3	+0.53
10.	1998	7	+0.52
11.	1998	8	+0.52

12. 2007 1 +0.51
13. 2009 9 +0.5
14. 2009 11 +0.5
*15. 2010 4 +0.5

GLOBAL ANOMALIES, APRIL

Year Mo C

1. 1998 4 +0.76
*2. 2010 4 +0.5
3. 2005 4 +0.46
4. 2002 4 +0.34
5. 2007 4 +0.28
6. 2001 4 +0.28
7. 2003 4 +0.25
8. 2004 4 +0.25
9. 2006 4 +0.24
10. 1995 4 +0.21
11. 1983 4 +0.16
12. 2009 4 +0.16

NORTHERN HEMISPHERE ANOMALIES

Year Mo C

1. 1998 4 +1.01
2.*2010 3 +0.86
3. 1998 2 +0.85
4.*2010 1 +0.85
*5. 2010 4 +0.8
6. 2007 1 +0.75
7. 2005 4 +0.75
8.*2010 2 +0.73
9. 1998 5 +0.69
10. 2004 3 +0.68

TROPICS, ANOMALIES

Year Mo C

1. 1998 2 +1.3
2. 1998 1 +1.09
3. 1998 4 +1.06
4. 1998 3 +1.05
5. 1998 5 +0.89
6.*2010 2 +0.81

7.*2010 3 +0.73
8. 1997 12 +0.73
9.*2010 1 +0.66
*10. 2010 4 +0.65

NORTH POLE, ANOMALIES

Year Mo C
*1. 2010 4 +2.46
2.*2010 2 +2.3
3. 2007 4 +2.27
4. 1995 4 +2.26
5. 2006 2 +2.25
6. 2009 12 +2.09
7. 2005 12 +2.06
8. 1996 11 +2.01
9. 2001 12 +1.94
10. 2003 10 +1.83
11. 2005 4 +1.81
12. 2005 11 +1.8
13.*2010 1 +1.79
14. 2002 10 +1.73
15.*2010 3 +1.72

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

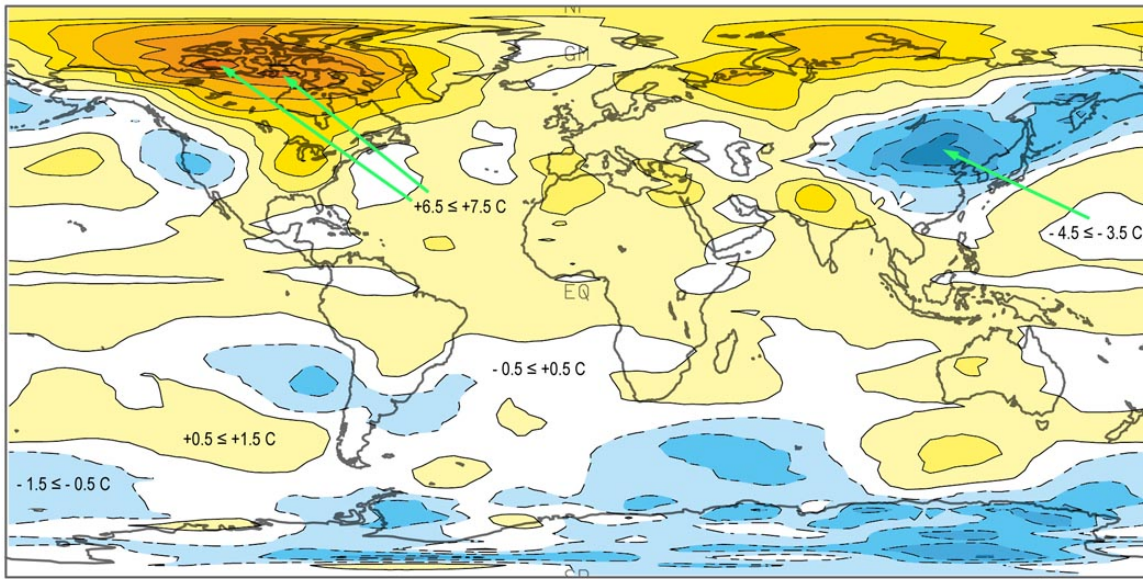
As part of an ongoing joint project between UAHuntsville, NOAA and NASA, Christy and Dr. Roy Spencer, a principal research scientist in the ESSC, use data gathered by advanced microwave sounding units on NOAA and NASA satellites to get accurate temperature readings for almost all regions of the Earth.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

APR 2010
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF
CONTOUR FROM -9.5000 TO 9.5000 CONTOUR INTERVAL OF 1.0000 PT(3,3) = -0.70000E-01

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 v5.3

