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Global Temperature Report: March 2010

March 2010 was third warmest month
in the 31-year temperature record

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

March temperatures (preliminary)

Global composite temp.: +0.65 C (about 1.17 degrees Fahrenheit) above
20-year average for March.

Northern Hemisphere: +0.85 C (about 1.53 degrees Fahrenheit) above 20-year
average for March.

Southern Hemisphere: +0.45 C (about 0.81 degrees Fahrenheit) above 20-year
average for February.

February temperatures (revised):

Global Composite: +0.60 C above 20-year average

Northern Hemisphere: +0.73 C above 20-year average

Southern Hemisphere: +0.45 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 April 12, 2010:

Compared to seasonal norms, March 2010 was the third warmest month since December 1978, 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. It was the second warmest month in the Northern Hemisphere.

Powered by the most intense El Nino Pacific Ocean warming event since 1997-1998, the first three months of 2010 have all landed among the six warmest months in the satellite temperature record, which starts in December 1978.

While 2010 has been significantly warmer than normal when averaged across large areas (global, hemisphere or the tropics), it isn't setting records in the continental U.S. No month so far this year has been in the top 50 warmest months in the contiguous 48 states; March was the only the 79th warmest month on record in the "Lower 48."

By comparison, Canada and especially the Canadian Arctic islands saw March temperatures that were as much as 8.5 C (15.3 degrees Fahrenheit) warmer than seasonal norms.

GLOBAL ANOMALIES

1. Feb 1998 +0.76 C
2. Apr 1998 +0.76 C
3. MAR 2010 +0.66 C
4. May 1998 +0.65 C
5. Jan 2010 +0.64 C
6. Feb 2010 +0.61 C
7. Jan 1998 +0.58 C
8. Jun 1998 +0.57 C
9. Mar 1998 +0.53 C
10. Jul 1998 +0.52 C
11. Aug 1998 +0.52 C
12. Jan 2007 +0.51 C
13. Sep 2009 +0.50 C
14. Nov 2009 +0.50 C
15. Apr 2005 +0.46 C
16. Oct 2005 +0.46 C
17. Sep 1998 +0.45 C
18. Dec 2003 +0.45 C

19. Sep 2005 +0.44 C
20. Jul 2009 +0.44 C

NORTHERN HEMISPHERE ANOMALIES

1. Apr 1998 +1.01
2. MAR 2010 +0.86
3. Feb 1998 +0.85
4. Jan 2010 +0.85
5. Jan 2007 +0.75
6. Apr 2005 +0.75
7. Feb 2010 +0.73
8. May 1998 +0.69
9. Mar 2004 +0.68
10. Jul 1998 +0.67

SOUTHERN HEMISPHERE ANOMALIES

1. Jul 2009 +0.67
2. Feb 1998 +0.66
3. May 1998 +0.60
4. Jan 1998 +0.55
5. Nov 2009 +0.54
6. Apr 1998 +0.51
7. Jun 1998 +0.50
8. Feb 2010 +0.50
9. Oct 2002 +0.49
10. Aug 1998 +0.48
11. MAR 2010 +0.46

TROPICS, ANOMALIES

1. Feb 1998 +1.30
2. Jan 1998 +1.09
3. Apr 1998 +1.06
4. Mar 1998 +1.05
5. May 1998 +0.89
6. Feb 2010 +0.82
7. MAR 2010 +0.73
8. Dec 1997 +0.73
9. Jan 2010 +0.66

10. Dec 1987 +0.62

SATELLITE DATASET ADDS A NEW SATELLITE

"With the March 2010 data, we have added a new satellite into the mix," said Christy. "NOAA-18 has operated since 2005. This changes slightly some of the values that were reported since it went into operation."

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:

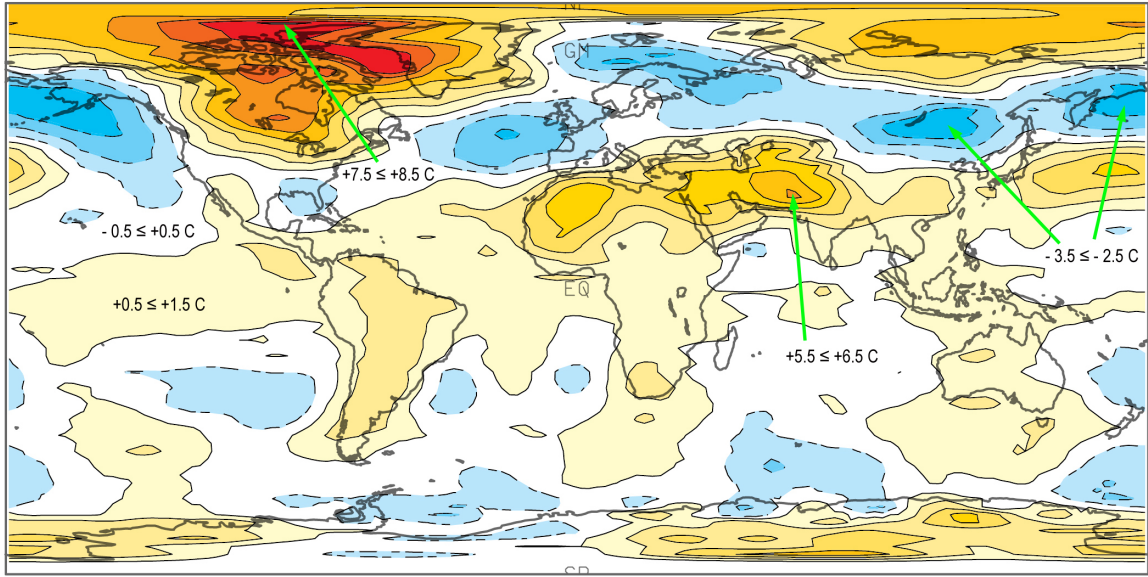
vortex.nsstc.uah.edu/data/msu/t2lt/uahncdc.lt

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.

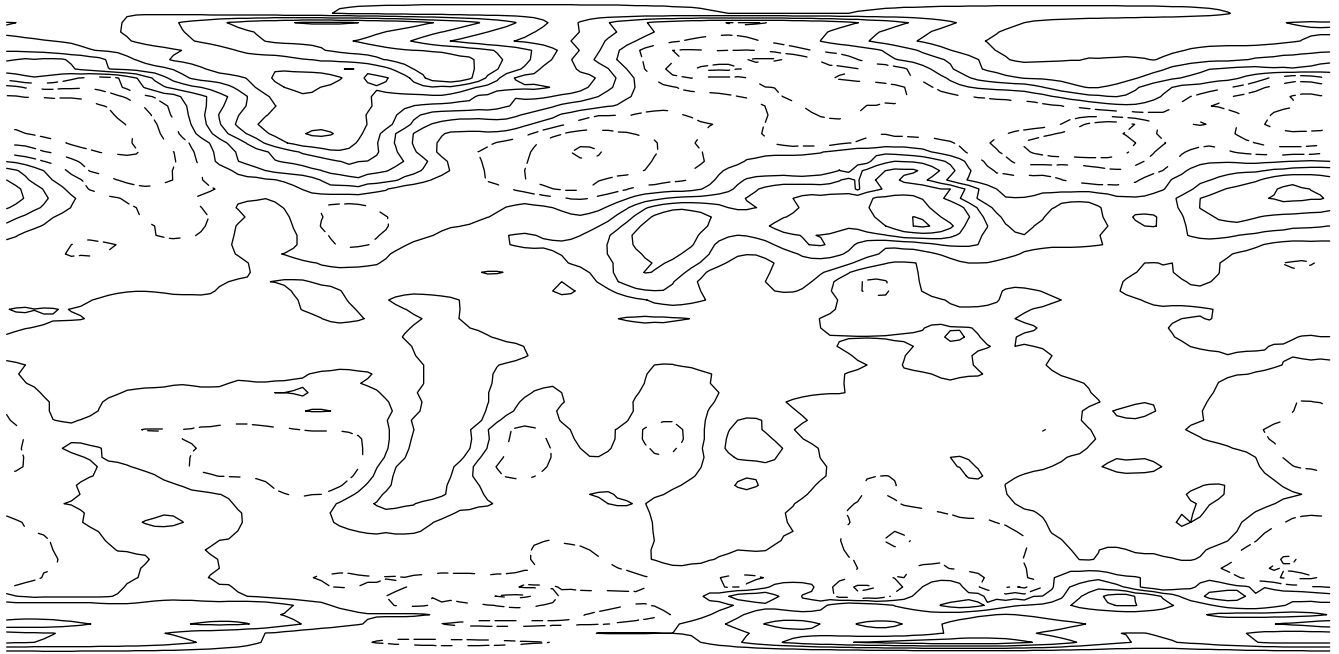
MAR 2010
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF
CONTOUR FROM -9.5000 TO 9.5000 CONTOUR INTERVAL OF 1.0000 PT(3,3)= 2.5300

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.

MAR 2010
LAYER = LT LOWER TROPOSPHERE



ZERO CONTOUR OFF
CONTOUR FROM -9.5000 TO 9.5000 CONTOUR INTERVAL OF 1.0000 PT(3,3)= 2.5300