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March 2011 was coolest

in more than a decade

Global Temperature Report: March 2011

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

March temperatures (preliminary)

Global composite temp.: -0.10 C (about 0.18 degrees Fahrenheit) below 30-year average for March.

Northern Hemisphere: -0.07 C (about 0.13 degrees Fahrenheit) below 30-year average for March.

Southern Hemisphere: -0.13 C (about 0.23 degrees Fahrenheit) above/below 30-year average for March.

Tropics: -0.35 C (about 0.63 degrees Fahrenheit) below 30-year average for March.

February temperatures (revised):

Global Composite: -0.02 C below 30-year average

Northern Hemisphere: -0.04 C below 30-year average

Southern Hemisphere: ±0.00 C above/below 30-year average

Tropics: -0.35 C below 30-year average

(All temperature anomalies are based on a 30-year average (1981-2010) for the month reported.)

Notes on data released April 5, 2011:

Driven by the La Nina Pacific Ocean cooling event, global average

temperatures in March 2011 were the coolest March since 1999, according to Dr. John Christy, professor of atmospheric science and director of the Earth System Science Center at The University of Alabama in Huntsville.

It was the fifth coolest March in the tropics, where the average temperature fell 0.35 C (about 0.63 degrees Fahrenheit) below seasonal norms. Three of the five coldest tropical Marches in the 33-year satellite temperature record have happened in the past dozen years: 5th, 2011, -0.35 C: 3rd, 2000, -0.42; and 2nd, 2008, -0.58 C.

Coldest Marches In the

33-yr Satellite Record

 (Degrees Celsius)

GLOBAL AVERAGE

 1. 1993 3 -0.45

 2. 1982 3 -0.35

 3. 1989 3 -0.3

 4. 1986 3 -0.26

 5. 1979 3 -0.25

 6. 1984 3 -0.23

 7. 1985 3 -0.23

 8. 1994 3 -0.23

 9. 1987 3 -0.18

10. 1997 3 -0.13

11. 1995 3 -0.12

12. 1992 3 -0.11

13. 1980 3 -0.1

14. 1999 3 -0.1

15.\*2011 3 -0.1

NO. HEMISPHERE

 1. 1982 3 -0.57

 2. 1984 3 -0.53

 3. 1985 3 -0.5

 4. 1993 3 -0.47

 5. 1980 3 -0.4

 6. 1986 3 -0.36

 7. 1979 3 -0.33

 8. 1989 3 -0.29

 9. 1992 3 -0.22

10. 1994 3 -0.21

11. 1987 3 -0.21

12. 1995 3 -0.16

13. 1997 3 -0.14

14. 1996 3 -0.14

15.\*2011 3 -0.07

SO. HEMISPHERE

 1. 1993 3 -0.43

 2. 2008 3 -0.37

 3. 1989 3 -0.32

 4. 1994 3 -0.26

 5. 1979 3 -0.17

 6. 1987 3 -0.16

 7. 1999 3 -0.16

 8. 1986 3 -0.15

 9. 1990 3 -0.14

10. 1982 3 -0.13

10.\*2011 3 -0.13

11. 1997 3 -0.12

12. 2001 3 -0.09

13. 1995 3 -0.08

14. 2000 3 -0.07

15. 1992 3 -0.01

TROPICS

 1. 1989 3 -0.75

 2. 2008 3 -0.58

 3. 2000 3 -0.42

 4. 1993 3 -0.36

 5.\*2011 3 -0.35

 6. 1986 3 -0.34

 7. 1997 3 -0.28

 8. 1999 3 -0.25

 9. 2001 3 -0.24

10. 1985 3 -0.23

11. 1990 3 -0.18

12. 1994 3 -0.16

13. 2009 3 -0.16

14. 1984 3 -0.12

15. 1979 3 -0.1

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

the new site 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.

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