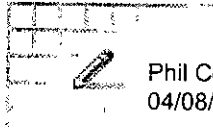


COS 6

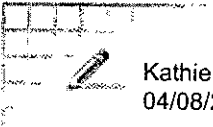


Phil Cooney  
04/08/2003 06:11:03 PM

Record Type: Record

To: See the distribution list at the bottom of this message  
cc:  
Subject: FYI: 20th CENTURY CLIMATE NOT SO HOT

----- Forwarded by Phil Cooney/CEQ/EOP on 04/08/2003 06:10 PM -----



Kathie L. Olsen  
04/08/2003 06:05:21 PM

Record Type: Record

To: Phil Cooney/CEQ/EOP@EOP  
cc:  
Subject: Fwd: CfA: 20th CENTURY CLIMATE NOT SO HOT

FYI

----- Forwarded by Kathie L. Olsen/OSTP/EOP on 04/08/2003 06:05 PM -----



Anne Kinney <akinney@hq.nasa.gov>  
04/03/2003 07:37:57 AM

Record Type: Record

To: Kathie L. Olsen/OSTP/EOP@EOP  
cc:  
Subject: Fwd: CfA: 20th CENTURY CLIMATE NOT SO HOT

---

>Hi Kathie! I hope you are doing well! I thought you would be  
>interested in this press release - especially the first sentence -  
>which relates so strongly to climate change.

warm regards, Anne

>Date: Tue, 1 Apr 2003 13:21:43 -0500  
>From: "STEPHEN P. MARAN" <hrsmaran@eclair.gsfc.nasa.gov>  
>To: akinney@hq.nasa.gov  
>Subject: CfA: 20th CENTURY CLIMATE NOT SO HOT  
>

>THE FOLLOWING RELEASE WAS RECEIVED FROM THE HARVARD-SMITHSONIAN  
>CENTER FOR ASTROPHYSICS, IN CAMBRIDGE, MASSACHUSETTS, AND IS  
>FORWARDED FOR YOUR INFORMATION. (FORWARDING DOES NOT IMPLY  
>ENDORSEMENT BY THE AMERICAN ASTRONOMICAL SOCIETY.) Steve Maran,  
>American Astronomical Society

>

>Contacts:

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>

>Release No: 03-10  
>For Immediate Release

>

>NOTE TO EDITORS: Photos of key climate indicators are available online at  
><http://cfa-www.harvard.edu/press/pr0310image.html>

>

>20th CENTURY CLIMATE NOT SO HOT

>

>Cambridge, MA -- A review of more than 200 climate studies led by  
>researchers at the Harvard-Smithsonian Center for Astrophysics has  
>determined that the 20th century is neither the warmest century nor  
>the century with the most extreme weather of the past 1000 years. The  
>review also confirmed that the Medieval Warm Period of 800 to 1300  
>A.D. and the Little Ice Age of 1300 to 1900 A.D. were worldwide  
>phenomena not limited to the European and North American continents.  
>While 20th century temperatures are much higher than in the Little  
>Ice Age period, many parts of the world show the medieval warmth to  
>be greater than that of the 20th century.

>

>Smithsonian astronomers Willie Soon and Sallie Baliunas, with  
>co-authors Craig Idso and Sherwood Idso (Center for the Study of  
>Carbon Dioxide and Global Change) and David Legates (Center for  
>Climatic Research, University of Delaware), compiled and examined  
>results from more than 240 research papers published by thousands of  
>researchers over the past four decades. Their report, covering a  
>multitude of geophysical and biological climate indicators, provides  
>a detailed look at climate changes that occurred in different regions  
>around the world over the last 1000 years.

>

>"Many true research advances in reconstructing ancient climates have  
>occurred over the past two decades," Soon says, "so we felt it was  
>time to pull together a large sample of recent studies from the last  
>5-10 years and look for patterns of variability and change. In fact,  
>clear patterns did emerge showing that regions worldwide experienced  
>the highs of the Medieval Warm Period and lows of the Little Ice Age,  
>and that 20th century temperatures are generally cooler than during  
>the medieval warmth."

>

>Soon and his colleagues concluded that the 20th century is neither  
>the warmest century over the last 1000 years, nor is it the most  
>extreme. Their findings about the pattern of historical climate

>variations will help make computer climate models simulate both  
>natural and man-made changes more accurately, and lead to better  
>climate forecasts especially on local and regional levels. This is  
>especially true in simulations on timescales ranging from several  
>decades to a century.

>

>--Historical Cold, Warm Periods Verified--

>

>Studying climate change is challenging for a number of reasons, not  
>the least of which is the bewildering variety of climate indicators -  
>all sensitive to different climatic variables, and each operating on  
>slightly overlapping yet distinct scales of space and time. For  
>example, tree ring studies can yield yearly records of temperature  
>and precipitation trends, while glacier ice cores record those  
>variables over longer time scales of several decades to a century.

>

>Soon, Baliunas and colleagues analyzed numerous climate indicators  
>including: borehole data; cultural data; glacier advances or  
>retreats; geomorphology; isotopic analysis from lake sediments or ice  
>cores, tree or peat celluloses (carbohydrates), corals, stalagmite or  
>biological fossils; net ice accumulation rate, including dust or  
>chemical counts; lake fossils and sediments; river sediments; melt  
>layers in ice cores; phenological (recurring natural phenomena in  
>relation to climate) and paleontological fossils; pollen; seafloor  
>sediments; luminescent analysis; tree ring growth, including either  
>ring width or maximum late-wood density; and shifting tree line  
>positions plus tree stumps in lakes, marshes and streams.

>

>"Like forensic detectives, we assembled these series of clues in  
>order to answer a specific question about local and regional climate  
>change: Is there evidence for notable climatic anomalies during  
>particular time periods over the past 1000 years?" Soon says. "The  
>cumulative evidence showed that such anomalies did exist."

>

>The worldwide range of climate records confirmed two significant  
>climate periods in the last thousand years, the Little Ice Age and  
>the Medieval Warm Period. The climatic notion of a Little Ice Age  
>interval from 1300 to 1900 A.D. and a Medieval Warm Period from 800 to  
>1300 A.D. appears to be rather well-confirmed and wide-spread,  
>despite some differences from one region to another as measured by  
>other climatic variables like precipitation, drought cycles, or  
>glacier advances and retreats.

>

>"For a long time, researchers have possessed anecdotal evidence  
>supporting the existence of these climate extremes," Baliunas says.  
>"For example, the Vikings established colonies in Greenland at the  
>beginning of the second millennium that died out several hundred  
>years later when the climate turned colder. And in England, vineyards  
>had flourished during the medieval warmth. Now, we have an  
>accumulation of objective data to back up these cultural indicators."

>

>The different indicators provided clear evidence for a warm period in  
>the Middle Ages. Tree ring summer temperatures showed a warm interval  
>from 950 A.D. to 1100 A.D. in the northern high latitude zones, which  
>corresponds to the "Medieval Warm Period." Another database of tree  
>growth from 14 different locations over 30-70 degrees north latitude

>showed a similar early warm period. Many parts of the world show the  
>medieval warmth to be greater than that of the 20th century.

>

>The study -- funded by NASA, the Air Force Office of Scientific  
>Research, the National Oceanic and Atmospheric Administration, and  
>the American Petroleum Institute -- will be published in the Energy  
>and Environment journal. A shorter paper by Soon and Baliunas  
>appeared in the January 31, 2003 issue of the Climate Research  
>journal.

>

>Headquartered in Cambridge, Massachusetts, the Harvard-Smithsonian  
>Center for Astrophysics (CfA) is a joint collaboration between the  
>Smithsonian Astrophysical Observatory and the Harvard College  
>Observatory. CfA scientists organized into six research divisions  
>study the origin, evolution, and ultimate fate of the universe.

>

>-----  
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>should be sent to the same address.

--

Anne L. Kinney  
Director, Astronomy and Physics Division  
Office of Space Science  
NASA Headquarters

For appointments, call Jane Davis at 202-358-2150

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