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Natural forces stalling global warming, UWM pair say

"We speculated that the temperature will be decreasing for a couple of decades."

Anastasios Tsonis, researcher

Mathematicians' findings ignite debate, but they say world will heat up eventually

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Two researchers at the University of Wisconsin-Milwaukee say natural forces in the Earth's climate have conspired to end a recent period of global warming, and they predict that temperatures will change little or drop over the next decade or more.

The findings of mathematicians Kyle L. Swanson and Anastasios Tsonis contradict the assumptions of many climate scientists — including a leading figure who spoke in Milwaukee on Wednesday — who say the planet is currently warming.

Swanson and Tsonis believe that burning fossil fuels will lead to high-

er global temperatures over the century.

But their conclusion of lower temperatures in the near term has been used by anti-global warming forces to argue that the consensus on climate change isn't clear cut.

The UWM work was published in late February in Geophysical Research Letters and first reported in

early March in Discovery News.

A Baltimore Sun columnist then picked it up, and using other examples, he questioned why a report on the possible cooling of the Earth isn't getting the same kind of attention as those who say the planet is warming.

"I'll bet 10 dollars to a doughnut, with a very high degree of confidence, that decade by decade it's going to be warmer."

James Hansen, questioning study

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Findings ignite debate

Then, Tsonis said, "it became huge on the blogs" and became popular e-mail fodder.

Former TV meteorologist Rep. Jim Ott (R-Mequn) mentioned the UWM study on March 17 in his new e-newsletter called "The Hot Air Report," which contends

that there is significant disagreement among scientists over whether global warming is occurring and humans are playing a role.

Also, a spokesman for the libertarian Cato Institute said the organization is using the work of Swanson and Tsonis to buttress claims in an upcoming advertisement that says scientific debate over global warming is not settled.

The ad will run in the New York Times, Chicago Tribune and Los Angeles Times, spokesman Chris Kennedy said.

But Tsonis said that his and Swanson's research has been misinterpreted and shouldn't be used to throw cold water on policies aimed at cutting carbon dioxide emissions.

In 2007, the United Nations-sponsored International Panel on Climate Change concluded that burning fossil fuels such as coal and gasoline have generated massive amounts of carbon dioxide in the atmosphere.

These greenhouse gases have had a warming effect on the surface of the Earth.

"To me, we are throwing all of this carbon dioxide into the air — it does have some effect," Tsonis said. "Common sense tells me that."

Tsonis, whose work was funded by the National Science Foundation, said he is sometimes troubled that the

study is not fully understood.

"But in the end, I don't care," he said. "In the end, I report the science. I think that it is very important to understand the science."

Mathematical analysis

Tsonis and Swanson used mathematical analysis to look at the role of the Earth's natural climate cycles and the long-term weather patterns that drive them.

The Earth's global mean temperature swings up and down over time. It fell before World War I, increased during the 1920s and 1930s, fell again during the 1940s until about 1976.

Then, global temperatures rose from 1976 to 2001.

But the trend in mean temperatures since 2001 has been flat, said Tsonis, and is beginning to fall.

Tsonis and Swanson found that the Earth is in the beginning of a long-term climate cycle where temperatures will level off or drop over the next few decades.

The reason for the change is that, inevitably, climatic forces begin to work so closely together that a slight change creates instability and throws the climate into a new state.

They used cyclists riding in a group time-trial as an example: Their motion is synchronized and carefully planned to maximize the team's overall speed. But if

they were tied together with a rope, the slightest misstep would cause a crash.

After a period of warming in the 1980s and 1990s, "we speculated that the temperature will be decreasing for a couple of decades," Tsonis said.

Still, all of this will be superimposed over a long-term trend of warming caused by greenhouse gases.

"There is going to be a shift upward," Tsonis said. "And together with the effects of greenhouse gases, it will make it really hot."

Natural factors

James Hansen, a climate scientist and director of the Goddard Institute for Space Studies at NASA, said during an appearance in Milwaukee on Wednesday that he agreed that natural factors play a role in the climate.

But they are dwarfed by the impact of carbon dioxide and other heat-trapping gases.

Natural variations linked to sun spots and volcano eruptions can create short-term cooling factors, but these are not significant enough to counter the long-term trend of higher concentrations of carbon dioxide in the atmosphere, said Hansen, the featured speaker at the Renewable Energy Summit.

"I'll bet 10 dollars to a doughnut, with a very high degree of confidence, that decade by decade it's going to

be warmer — not that each decade is going to be warmer by the same amount," Hansen said.

Last year was the coldest year in this decade. Global warming skeptics have used a chilly 2008 as evidence that the climate crisis has been overstated.

But NASA research shows that 2008 was the ninth-warmest year since 1880. Hansen said the cooling witnessed last year is linked to a La Niña weather pattern in the Pacific Ocean, which is now receding and shifting into a period of a warmer El Niño weather pattern.

Hansen was asked if he would engage in a debate with another scientist about climate science.

A debate would provide grist for television viewers, but would not lead to greater understanding of the issue, he said. To do that, President Barack Obama should call on the National Academy of Sciences to report about the state of global warming science.

President George W. Bush, who opposed regulation of greenhouse gases, asked for a similar study in 2001.

"Temperatures are, in fact, rising," the report found. "Greenhouse gases are accumulating in the Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise."