

Akasofu - Little Ice Age is still with us

Lawrence Solomon, Financial Post

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The Earth slowly but surely warmed over the course of the 20th century, global temperatures increasing by about half a degree Celsius. The evidence for this global warming comes from ice core data from the Arctic island of Severnaya Zemlya, published just last year.

The Earth slowly but surely warmed over the course of the 19th century, too, global temperatures again increasing by about half a degree Celsius. The evidence for this global warming comes from the same ice core data.

The Earth slowly but surely warmed over the course of the 18th century, too, global temperatures increasing by about a half a degree Celsius. The evidence for the global warming that occurred during the 18th century comes from multiple sources, all well recognized.

The Earth slowly but surely warmed over the course of the latter part of the 17th century as well, global temperatures increasing at the rate of about a half a degree Celsius per century, according to one of those multiple sources, the only one that extends that far back.

Throughout these centuries, which followed the depths of the Little Ice Age, the rate of global warming has been fairly consistent. "There is clearly a linear increase of temperature from about 1800 based on last year's ice-core data," states geophysicist Syun-Ichi Akasofu of the University of Alaska. "Roughly the same linear change in temperatures extends back to the earliest recordings, going back to about 1660, even before the Industrial Revolution."

Dr. Akasofu, the founder of the International Arctic Research Center and a giant in Arctic research since his discovery in 1964 of the origin of storms in the aurora borealis, postulates a startlingly straightforward explanation of the warming Earth has seen in the 20th century. The long slow climb out of the Little Ice Age, he states, is typically thought to have ended in 1900. Chances are good that it didn't. "The Earth may still be recovering from the Little Ice Age," he says, pointing to the consistent rate of warming over the centuries.

Although Dr. Akasofu thinks a continuation of the Little Ice Age can explain the 20th-century warming, he believes other explanations may also be valid. Any explanation, however, would point to a natural process, and not manmade CO₂. The evidence for this lies in the Arctic, which magnifies temperature fluctuations seen at lower latitudes, highlighting temperature changes that might otherwise seem unremarkable. Arctic data, for example, shows a very large rise and then fall in temperature between 1910 and 1975, while the global average data shows this fluctuation as more a minor blip, peaking at 1940. A second temperature fluctuation involves a rise after 1975.

Because the pre-1940 increase in temperature happened without much CO₂, and the 1940-75 temperature decline happened after CO₂ emissions began in earnest, "the large fluctuation between 1910 and 1975 can be considered to be a natural change. Contrary to the statement by the UN's Intergovernmental Panel on Climate Change in its 2007 Report, it is not possible to say with any confidence that the rise after 1975 is mostly caused by the greenhouse effect."

Ironically, the IPCC's own climate-change models also point to carbon dioxide's irrelevance in climate

change. The Earth's warming is not uniform: Different geographic regions are warming at different rates, while others are actually cooling. Dr. Akasofu asked the IPCC's Arctic group to apply its global climate models to "hindcast" the geographic distribution of the temperature change during the last half of the last century. ("Hindcasting" asks a model to produce results that match the known observations of the past --a model that can do this helps establish its ability to predict future conditions.)

To his surprise, the model's results showed dramatically different temperatures than those obtained from actual readings, with no apparent relationship between the two. Initially, Dr. Akasofu thought the problem lay in the model. "However, this possibility is inconceivable, because the increase of CO2 measured in the past is correctly used in the hindcasting, and everything we know is included in the computation. It took a week or so for another possibility to dawn on us: If the warming and cooling is not caused by the greenhouse effect, the models will not show CO2-related warming and cooling."

To examine that possibility, Dr. Akasofu checked to see if the magnified warming in the continental Arctic was still increasing, in line with the ever-increasing amounts of CO2 entering the atmosphere. To his surprise, the continental Arctic had stopped its magnified warming, and was now warming only at the same rate as the rest of the world. The upshot: The IPCC models tend to confirm that: "Much of the prominent continental Arctic warming during the last half of the last century is due to natural change."

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CV OF A DENIER:

Syun-Ichi Akasofu, director of the International Arctic Research Center of the University of Alaska Fairbanks, received his PhD in geophysics in 1961. He has published more than 550 professional journal articles, authored or co-authored 10 books and has been the invited author of many encyclopedia articles. Twice named one of the "1,000 Most Cited Scientists," he has been honoured by the Royal Astronomical Society of London, the Japan Academy of Sciences and the American Geophysical Union. In 2003, he received the Order of the Sacred Treasure, Gold and Silver Star, from the Emperor of Japan. As director of the university's Geophysical Institute in 1986-99, he helped establish it as a key research centre in the Arctic. He also helped establish the Alaska Volcano Observatory.

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