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Global warming not man-made phenomenon

Hebrew University, Canadian scientists cite data from study

Global warming will not be helped much by efforts to reduce carbon dioxide emission into the atmosphere, say two scientists who have studied the matter.

Dr. Nir Shaviv, an astrophysicist from the Racah Institute of Physics of the Hebrew University of Jerusalem, and Prof. Jan Veizer a geochemist at the University of Ottawa in Canada and Ruhr University in Germany, say that temperature variations are due more to cosmic forces than to the actions of man.

In a recent article published in GSA Today (the journal of the Geographic Society of America) and described in Nature, Shaviv and Veizer tell of their studies illustrating a correlation between past cosmic ray flux • the high-energy particles reaching us from stellar explosions -- and long-term climate variability, as recorded by oxygen isotopes trapped in rocks formed by ancient marine fossils. The level of cosmic ray activity reaching the earth and its atmosphere is reconstructed using another isotopic record in meteorites.

The study showed that peak periods of cosmic rays reaching the earth over the past 550 million years coincided with lower global temperatures, apparently due to the way that the cosmic rays promote low-level cloud formation (hence blocking out sun warming). No correlation was obtained, however, with the changing amount of atmospheric carbon dioxide.

The conclusion of the two scientists is, therefore, that celestial processes seem to be the dominant influence on climate change, and that increased carbon dioxide release, while certainly not beneficial, is only secondary to those forces which are beyond our control.

In practical terms, says Dr. Shaviv, "The operative significance of our research is that a significant reduction of the release of greenhouse gases will not significantly lower the global temperature, since only about a third of the warming over the past century should be attributed to man." Thus, say the scientists, the Kyoto accord of 1997 -- which was aimed at tackling the global warming phenomenon through limitations on carbon dioxide -- is not the panacea some thought it would be.

Taking the long-range view, Dr. Shaviv and Prof. Veizer believe that fluctuations in cosmic ray emissions account for about 75 percent of climate variation over millions of years. They acknowledge that this position pits them against prevailing scientific opinion, which still places a heavy emphasis on the negative role of greenhouse gases.

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