

Global Warming: True or False?

By Louis P. Solomon with Dick Van Orden

Global warming has become an international issue. It may be one of the most serious issues that mankind has ever faced. Initially, only the scientific community was involved. Weather scientists spoke to each other about 1 or 2 degrees of change of the average temperature, and in general, the world didn't pay any attention. Who cares if it is a little warmer or, for that matter, a little colder? The discussions continued, and all of a sudden there were some scientific observations, which were followed by scientific articles, which were then re-published in the popular press. It was found that this small change in temperature could result in the melting of the polar ice caps. The effect would be that much of the existing shoreline, in countries around the world, would disappear. Since the great majority of the world's population lives within a few hundred miles of a coast, this became serious and challenging. New York, Los Angeles, London, Calcutta, and many other cities, large and small, were possibly going to be lost to the encroaching sea.



Scientists pointed out that we have almost no data, and the period of time that we have measured the climatology (recorded average climate) is so small (roughly 150 years) that we could not make any predictions, nor even guess climate trends. Then, people began taking core samples of the snow pack in both the Arctic and the Antarctic, and suddenly, they found that there were much higher levels of carbon dioxide (CO₂) than had ever existed before. Increase of CO₂ meant that more energy would remain in the atmosphere, and the global temperature would continue to rise. Clearly, said some scientists, the formation of increased CO₂ was due to the burning of fossil fuels, and it had to be stopped, or severely restricted. The consequences could be disastrous if we didn't reduce the amount of carbon dioxide being released into the atmosphere. The polar ice caps were melting, causing the ocean level to rise, and threatening the existence of many species of animals, such as polar bears.

Scientists placed themselves in different camps: those who said the clearly increasing temperature was due to CO₂ and another smaller group who said they weren't sure.

It is hard to argue with data. The measured data, taken with great care and precision by competent and devoted scientists, clearly shows that the average temperature is increasing. There is no argument with that data. But, the reasons for the warming are not so clear. There is also the nagging data which tells about previous times when the earth began to get warmer, and then colder. During the period from the 13th to the 18th centuries, there was unusually cold weather in Europe. During that period, there were also brief periods of warming. This was originally thought to be global in nature, but now climatologists are not so sure. It could have been just in Europe. And what caused this event? It is postulated that the sun itself went through some minor changes in its output of energy, but this is only a guess. It was not due to CO₂ levels in the atmosphere. Almost everyone agrees with this.

The development of computer models, and the associated very high speed computers, has allowed the scientific community to make remarkable strides in their ability to predict the future. The use of computer models and high-speed computers is applicable to all branches of physics, including meteorology.

Still, with all our tools, there are still some things that we cannot yet do. Current climatology models predict that with increasing CO₂ in the atmosphere, the reflected heat will continue to warm the planet. However, there is a little problem. The models that are in current use, marvels in and of themselves, do not contain clouds. Now, clouds shield the surface of the planet from incident energy from the sun. Therefore, if clouds are not accurately depicted, based upon relevant physics, then the predictions of global heating and warming will be inaccurate. Climatologists are looking only for a small change in temperature that will occur, and the models are not sufficiently accurate or precise to predict such small changes.

Let us return to the fundamental question: Is there a warming trend going on? The answer appears to be unequivocally, yes. But, why is the world getting warmer? Is it really because of CO₂ or is a natural fluctuation in the climatology?

Scientists are now quite sure that there is a 800 year cycle where the Earth becomes colder, and warmer. Half of that cycle is 400 years, so the Little Ice Age could be the cold part of the cycle, and we could now be going through the warm part of the cycle. If this is true, then about 2200 it should start to get cold again.

As inhabitants of our planet, we must be concerned about the climatological state of the planet, and take whatever steps we can to protect ourselves, the rest of the animal species, and the planet itself. What is not clear is that producing energy by burning fossil fuels and the resulting CO₂ is actually having an effect on the global climatology.