

## Ice on land – Pope’s climate theory

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Historically, the earth’s temperature and sea level have been regulated within narrow bounds. These narrow bounds changed over the last 50 million years. Data collected on the earth’s temperature demonstrates increase then decrease in cycles that are bounded. The range of these cycles has changed over the 50 million years, but the range remained well bounded within narrow limits while the temperature levels decreased much more. In the 50 million year period, the warmest times were when there was, relatively, less ice on land and the coldest times were when there was, relatively, more ice on land. The Climate Scientists on all sides of this debate do acknowledge this, but most say the more and less ice is a result of warming and cooling. It is really the primary cause of warming and cooling. During the major warm periods and longer cold periods of the most recent 2 million years, the bounds of temperature and ice were further apart. This occurred because the oceans would get high and warm, with much warm thawed ocean water in Polar Regions and it snowed to remove that warm water from the oceans and dump it on land. This was followed by a prolonged cold period because it took a long time to thaw and remove that much ice.

Proxy data, especially the ice core data from Greenland and Antarctica, demonstrate the correlations between temperature and ice accumulation rates (measured), inferred radiation (IR), and albedo (calculated from temperature). IR is the radiation to space that is a function of a constant multiplied by temperature to the fourth power. It is powerful. Albedo is the proportion of the incident light or radiation that is reflected by a surface, in this case that of earth. The data demonstrates some correlation and some lack of correlation between CO<sub>2</sub> and temperature. The correlation is understandable because the vapor pressure of any gas that dissolves in water is a strong function of temperature. Open a hot and a cold carbonated soft drink and see the difference. Data demonstrates excellent correlation with ice on earth and temperature. The extent of ice on earth increases when earth gets colder. Scientists on all sides of the debate acknowledge this. The ice advance or retreat on the earth’s surface is labeled as positive feedback. Some climate theorists fear the ice will reach a “tipping point” or point of no return. In 50 million years, there has never been a tipping point from which there was no recovery. The cycle always recovers. The last ten thousand years has demonstrated tighter bounding. This tighter bound is the new normal.

Earth temperature is regulated by something that is abundant, not a trace gas. CO<sub>2</sub> has been arbitrarily assigned responsibility for climate change while the much more abundant greenhouse gas, “Water Vapor”, has been ignored. Water, Ice, Water Vapor, Clouds are abundant and that regulates earth temperature. Earth is warmer when there is less ice on earth and earth is colder when there is more ice on earth. That is not a result, as the Climate Scientists always tell us, it is the cause. I repeat this because it is most important.

IR radiation in the tropics does provide most of the cooling of earth. It has a variable thermostat that increases cooling by a constant multiplied by the temperature to the fourth power. That is the most powerful cooling for earth, but it does not have a fixed thermostat.

In the Polar Regions, in the Northern Hemisphere and in the Southern Hemisphere, there are thermostats with fixed set points. The Polar Oceans freeze and thaw at the same temperature and that does turn cooling on and off. The cooling is provided by more snowfall when oceans are thawed and is turned off when the oceans get cold and freeze and cut off the source of moisture. This is the cooling that has thermostats with a fixed set point that explains the amazing stability of earth temperature, and sea level.

Oceans warm, Polar Oceans Thaw, Snowfall increases. Ice is replenished on Antarctica, Greenland and Mountain Glaciers. Ice builds up and spreads out, reflecting more energy, dumping more ice and ice cold water into the oceans and on land until earth cools. Polar oceans freeze and the sun takes away ice every year until earth warms again.

About 2000 years ago, there was a Roman Warm Period and then it got cold. About 1000 years ago, there was a Medieval Warm Period and then it got cold. That was called the Little Ice Age. It is warm now because it is in the warm part of the natural cycle.

**It is a natural cycle and we did not cause it.**

**CO2 just makes green things grow better, while using less water.**

### **Theorist Biographical Information**

Herman Alexander (Alex) Pope, a retired NASA-JSC engineer, began his career as a Co-op student at the Manned Spacecraft Center in Houston Texas in 1963 and concurrently earned a BS degree in Engineering Mechanics from Virginia Tech in 1967. Mr. Pope supplied computer analysis to the Gemini, Apollo, Space Shuttle, Space Station, X-38 and other missions and projects between 1963-2007.

In 2008, Mr. Pope attended a climate lecture on ice cycle theory which included a historical review of original theories by Maurice Ewing and William Donn from the 1950's and 1960's. This experience inspired Mr. Pope to conduct his own independent study for over 8 years.

Mr. Pope resides in Houston, Texas with his lovely wife Barbara. Mr. Pope has four children and six grandchildren.