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Low Sunspot Numbers Cool Global Warming

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July 15, 2009,

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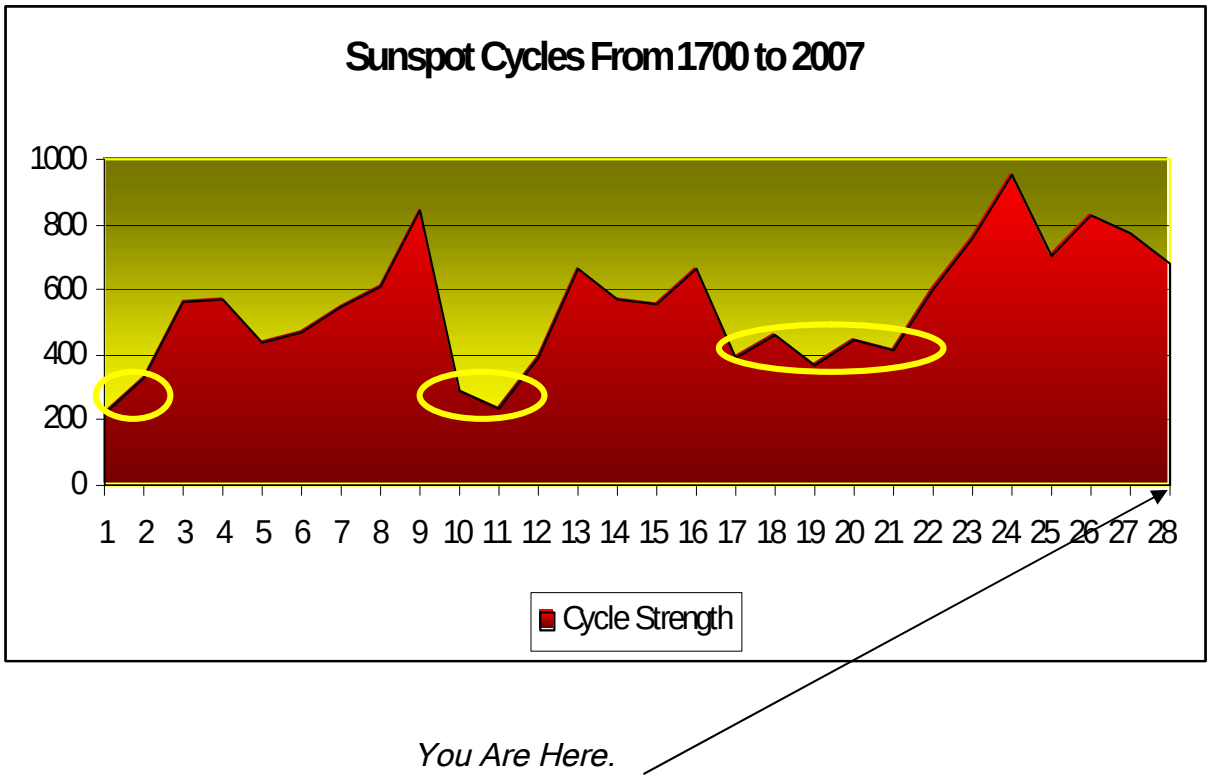

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COOL
1-1-1-1

Author's note: unless stated, all charts and graphs are the work of the author. All support data comes from the NOAA, SIDC, Weather Tarapin and Wikipedia.Org. A special thanks to my friend, Ron and my family for their assistance in this paper.

The June 2009 edition of *Discovery* contained an article titled *"The Big Heat",* an interview of leading experts by the editor of Discover, Corey S. Powell. Overall, the article appears to dismiss sunspots as a causative agent of global warming and named carbon dioxide as the culprit. Powell asked, *"How do you deal with skeptics, both in Congress and in the public, who always seem to have a contrary statistic?"*

The reply from Stephen Schneider answered, "*If there was a compelling account of the other side it would be published - and if skeptics had evidence, it would be published."*

This last statement is not true. Having been in the publishing business, the publisher follows the direction of the owner or the board of directors.

If no one is favoring contradictory arguments to greenhouse gasses at this time, it won't be published. However, a special thank you goes out to the Lakeland Ledger who has provided a forum for editorials in the *Letters to the Editor* column.

Ireland has outlawed CO2 warming commercials as rubbish. They think the global warming issue is a normal cycle with the earth. I couldn't agree more.

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2-2-2-2

The Bottom Line:

There ***is strong*** evidence that the main culprit of global warming since 1700 has been increased sunspots activity with numerous stronger sunspot cycles and retention of solar heat over the last 300 years. However, that is changing again as it has three other times in the last 300 years as stated by Joseph D'Aleo.

The key points are as follows:

- In spite of the increase in CO_2 in recent years, USA average winter temperatures continue to drop from a century high of 37°F in 2000 to 33°F in 2008, below the year 1996 33°F mark.
- The number of named storms in the Atlantic peaked at a century high of 28 in 2005. The strong storms from 1996 to 2005 dropped to 16 of last year; 50% were tropical storms. The official forecast for 2009 is roughly ten named storms, half again to be tropical storms. This reflects an overall cooling of our oceans and atmosphere and parallels sunspot activity, not CO_2 numbers.
- In Sir James Jeans' book, *"Through Space and Time",* Sir Richard Gregory researched sunspot correlation with Lake Victoria lake levels and found a perfect match between lake levels and sunspot activity (See Figure 1).

2-2-2-2

- The present USA drought conditions began as early as 2004. In the June 14, 2007 issue of Time Magazine, page 12, maps of USA depict droughts developing across the states beginning in 2004. Again, the drop in precipitation is matching the drop in sunspot activity, not CO_2 numbers.
- From the end of the Mini-Ice Age in 1750 to 2007, sunspot activity grew and peaked at 948 total sunspot mean. This is the total of all annual means for a given cycle. The peak occurred in the 1954 to 1964 sunspot cycle. Now the sunspot mean for 2008 is roughly 2.9, which is the third lowest first-year of a sunspot cycle in 300 years (See Figures 12, 13 and 15). The 2009 numbers are not much better. That is why earth temperatures are dropping. Sunspot cycle activity is again at an all time low.
- The cooler sunspot cycle that began January 2008 could be the beginning of a cooler period lasting two to five sunspot cycles before global warming begins again, per Joseph D'Aleo. In the late 1800s and early 1900s there were five such cooler cycles, but stronger than the *Maunder* and *Dalton Minimums.* The five cooler cycles began in 1878 and lasted until 1932.

3-3-3-3

COOL
4-4-4-4

- In1914 there was only one tropical storm in the Atlantic, which came after three of the five smaller sunspot cycles and during a period of near *zero* sunspot activity. Thus, the number of named storms should drop to a few named storms, maybe one or zero, at the end of this cycle or at the end of its twin-cycle 20 to 25 years from now.

These climate changes match sunspot activity, not greenhouse gas theories.

In Detail:

Global Warming and Global Cooling Causes

According to one report, all the planets in our solar system have warmed up (Ker Than, "*Sun blamed for Warming of Earth and Other Worlds"* by Live Science, March 12, 2007). That removes SUVs, Industrial Revolution, cows, sheep, humans and greenhouse gasses as the cause for global warming.

Global warming requires heat and the source is the sun and its sunspots. Sunspots blast from the sun's surface into space about a half-million miles. Rather than the earth being 92.5 million miles away, like a campfire gaining fuel, the earth is closer to source 92 million miles away.

4-4-4-4

COOL
5-5-5-5

This is not based on one sunspot giving off this much heat. Instead, this is based on hundreds of sunspots over a period of 11 years. In the end, the sunspots are the difference between an ice age, at least a mini-ice age, and the superb living conditions for man, mammals, reptiles and plant life on earth beginning in this past century around 1934.

Comparing the size of the earth to a sunspot is like having a green pea next to a giant oak tree. Yet, cows in another science, news feature, magazine are blamed for global warming.

Considering the size of a cow, how many cows would it take to match a sunspot? That is a lot of cows.

However, in terms of the size of a sunspot, there's not that much crazing area on earth or places for cow patties to be left behind. Thus, cows cannot be suspect in the global warming game of "Clue"®

When one adds up 500 to 900 average sunspot mean in 11 years of a sunspot cycle, the sunspots warms the earth to the USA average winter temperatures above 33°F. When the numbers are lower, from 100 to 400 total sunspot mean, the earth's temperature drops and the USA average winter temperatures are less than or equal to 32°F.

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COOL
6-6-6-6

A sunspot cycle in a graph looks like a roller coaster ride (See Figure 14 from SIDC). Each hill and valley is different. During a low count, such as a sunspot cycle of 200 total sunspot mean in comparison to the 948 mentioned above, the overall earth's temperature drops, hurricanes numbers and strength numbers drop and precipitation drops off.

On the other hand, glaciers and Polar Region ice packs grow. When the sunspot count is high, the opposite occurs.

The present sunspot cycle now matches the two small sunspot cycles of 1700 to 1722 just after the Mini-Ice Age, also known as the *Maunder Minimum*. The other cold cycles were from 1798 to 1822, known as the *Dalton Minimum*.

Over a century, nine cycles take place. About seven cycles are high count and two are low count. The low count, according to D'Aleo breaks up global warming. (D'Aleo, Joseph. 2008 in *Top Five Years for Sun-Spotless Days Last Century, Could End up #3 or Even 2*). http://anhoenstclimatedebate.wordpress.com/2008/12/01/2008-in-top-five-years-for-sunspot and Sawyer, Christopher A., *The Greater Good*, ADE+P, p 48).

6-6-6-6

However, the breakup does not bring back mini-ice age conditions. Best estimate, nearly a half-century in low sunspot activity, below 200 total sunspot mean, is required to begin the next mini-ice age. Let's begin with a more realistic scenario.

At first, temperature, precipitation, hurricane strength and numbers should fluctuate upward due to a slight increase in sunspot activity from the beginning to the middle of the sunspot cycle.

Overall, the acceleration in cold will sink in around the 6th or 7th year of the cycle. After the 6th or 7th year, the sunspot cycle begins to decline in earnest.

A twin sunspot cycle will follow the present smaller cycle, per D'Aleo. .

There are things that cause this solar impact to vary. According to Sir James Jeans in his book, *"Through Space and Time"*, one reason is the earth's orbit is slightly elliptical and that orbit takes the earth slightly away and closer to the sun. This orbit repeats about every 100,000 years.

The second reason, according to Sir Jeans, is the earth's axis has a wobble something like a child's toy top. Presently, the axis wobbles around on a 26,000-year cycle.

The axis now points at the handle tip of the Little Dipper, which is the star Polaris. The axis used to point at the cup of the Little Dipper about 5,000 years ago. One day, in about 13,000 years, the axis will point again at the star Vargas.

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COOL
8-8-8-8

One should also look at the heating and cooling systems of the earth. One system is the jet streams and air currents. The other is the earth's oceans.

Together, the two cycle cold air and water respectfully to the Polar Regions and back to the Equator. This allows for a slow, even adjustment in the Earth's temperatures.

Sunspots Versus Greenhouse Gasses

Sunspots warm up the earth. Greenhouse gasses insulate the earth against change. Presently, overall climate change drags behind about 14 years. That might speed up as colder conditions set in.

The 2008/2009 winter is matching 1996 winter statistics. The Artic Ocean ice pack recovered to maximum size in 1979 after the 1964 to 1976 flat sunspot cycle (See Figure 23).

What is unknown is if the earth accelerates change in the absence of sunspot activity. For example, how long would it take the earth to drop to zero hurricanes if there was a sunspot mean of *three* or less each year in an 11-year cycle?

8-8-8-8

COOL
9-9-9-9

Let's talk basics. CO_2 is heavier than Nitrogen and Oxygen. Nitrogen and Oxygen makes up 99% of our atmosphere. It has to come down due to gravity.

CO_2 is heavier than H_20, which is hydrogen and oxygen. Should it not filter to the bottom of lakes and oceans?

In theory, the earth can produce its own dry ice. Carbon Dioxide, CO_2, falls in the ocean and somewhere in the depths of the ocean and at given atmospheres under required pounds of pressure per square inch, CO_2 converts to liquid. As the liquid CO_2 meets the sub-zero cold air in the Polar Regions, the CO_2 converts to dry ice or dry snow.

This form of CO_2 is more stable than H_2O and would help maintain the Polar Region ice pack that is mostly made up of H_2O. H_2O is a compound easily influenced by temperatures, whereas CO_2 is not.

As greenhouse gasses come to hover over the Polar Regions, their weight pulls them down and they fall on the Polar Region ice packs and are stored there. The gasses would also be stored in glaciers.

However, the theory of CO_2 conversion to dry ice or snow probably would not work there. If the CO_2 fell into glacier ice, there might not be enough pressure to convert the CO_2 to liquid nor would temperatures drop low enough to have them convert to dry snow or ice.

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COOL
10-10-10-10

If true, CO_2 in the atmosphere is a heat retainer and in the Polar Regions, CO_2 in dry ice form helps keep the Polar Region ice packs intact. Winguth, Arne; Wetzel, Patrick; and Maier-Reimer, Earnst, *"Simulated Sea-To-Air* CO_2 *Flux From 1948 to 2003 Using NCEP Reanalysis Surface Fluxes"* state in their abstract that CO_2 is found from the surface to the bottom in northern most places of the Atlantic Ocean.

As the earth warms up, topography ({permafrost}, tundra, woodland, grasslands, desert, sub-tropics and tropics) expands by moving further north and south of the Equator. During global cooling, the topography reverses and moves back to the Equator.

As the earth warms, there is more ice-free land and plants that need more CO_2 and water vapor. Animal populations should be expanding. As glaciers and Polar Region ice melts, CO_2 frozen in the ice is then released into the atmosphere at the equator.

As the earth cools, there is more ice-covered land and fewer plants. The need for CO_2 is less. Polar Region ice packs capture CO_2 and saved for plant use during global warming periods.

As stated in the theory, other CO_2 is converted to liquid and possibly dry snow or dry ice, which helps slow the impact of global warming.

10-10-10-10

It's all theory, but this process matches the full length of CO_2 as a gas, liquid and solid. This theory shows the full cycle of CO_2 whereas greenhouse theory pushed by many only looks at the atmospheric portion.

Climate Changes Taking Place

In spite of the increase in CO_2 in recent years, temperatures are dropping. Sunspot activity began to drop in earnest in 2002 after a valley in 2001.

The last two full sunspot cycles are less than 1977 to 1985. USA average winter temperatures began to drop from a century high of 37°F in 2000 to 33°F in 2008, below the 1996 33°F mark. Temperatures are matching the drop in sunspot activity, not the increase in greenhouse gasses.

The number of named storms in the Atlantic Basin hurricane season peaked at a century high of 28 in 2005. The season had mostly tropical storms and a couple of major hurricanes.

An unofficial hurricane season stretched from May to November last year. As of mid-July 2009, no named storm had formed in the Atlantic.

The strong storms of 1996 to 2005 dropped to 16 of last year and 50% of them were tropical storms.

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COOL
12-12-12-12

As colder sunspot cycles hit, the number of hurricanes will continue to drop. The official hurricane season will change from the June to November season to an unofficial timeframe of August to October season.

In some years, there may not be a hurricane at all. This was almost the case in 1914. The importance of this point is the timeframe required for heating the earth to a point that can produce warmer average winter temperatures around 37° and, in turn, provide for warmer oceans in the summer.

This was seen in the final cycle, 1996 to 2007, which had the most severe hurricane seasons on record.

This is now declining. Until the sunspot cycles grow again to 600 to 800 total sunspot mean for the 11-year cycle, the peak period for massive hurricanes seasons is over and may be over for the next 50 years. The reason for this, per D'Aleo, is the present cycle will at least have a twin and those two together will break up global warming.

This year's official NOAA forecasts for nine to 14 named storms and four to seven hurricanes. Two things are significant here and they correlate to sunspot activity.

One is the forecast begins below 10. The other is the appearance of a 50/50 split on number of tropical storms and hurricanes.

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COOL
13-13-13-13

Based on the numbers in the charts below, El Niños show up in years where there are fewer hurricanes than in peak years. Meteorologists state that an El Niños blocks the formation of hurricanes.

However, El Niños reflect colder ocean temperatures. When the oceans are colder, there should be fewer hurricanes.

Maybe El Niños are in place of hurricanes. If we take a look at the four key formations of weather, hurricanes need ocean water 82° from surface to 100 feet deep. El Niños need water about 60° to 70°.

La Niñas need the water temperatures a little colder around 40°. Finally, glaciers come in at 22°, 10 degrees below freezing.

Maybe all the El Niños and La Niñas are more temperature driven in terms of hurricane seasons. They may not be blocking formation of hurricanes at all. They simply exist in their respective temperature range.

Hurricanes begin as tropical storms. Some grow to major status.

If a season is dominated by tropical storms, there is a tendency to believe that the season was milder. That is not the case.

After major global warming from 1933 to 1995, the 1996 to 2007 sunspot cycle held the greatest number of tropical storms and number of hurricanes known to man.

The cycle also held the warmest USA average winter temperatures on record. If one is counting, that is 172 storms in 11 years or 14+ named storms a year. The numbers are half as much in the cooler cycles from 1878 to 1932.

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COOL
14-14-14-14

Based on the present sunspot cycle, the hurricane season data will probably drop to earlier 1900s records in the next 20 years. As D'Aleo said, we are in a break.

If greenhouse gasses were performing as people say, shouldn't storm statistics continue to climb? No, they shouldn't for greenhouse gasses are insulators not heaters.

What could be causing the temperatures to drop and hurricane activity to drop? Sunspot activity has dropped.

Sunspots and Droughts

One area where sunspot activity has almost an instant impact is precipitation.

Sunspots = humidity, higher lake, stream and river levels

No sunspots = more ice, lower lake, stream and river levels

The present USA drought conditions began in 2004. If one reviews the June 14, 2007 issue of Time Magazine, page 12, one would see maps of droughts developing across the USA beginning in 2004.

As stated above, in Sir James Jeans' book, *"Through Space and Time",* a study finished by Sir Richard Gregory in the early 1900s shows the Lake Victoria's lake levels perfectly matched sunspot activity, p. 159. The present drought is matching sunspot activity, which is around a sunspot mean of 1.5. The present sunspot activity matches 1710, 1810 and 1913 lows.

14-14-14-14

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COOL
15-15-15-15

Records show that during the warmer-cooler cycles of 1885 to 1932, there was one inch less rain on average than from 1971 to 2008. If the cycles match the strength of the 1710 and 1810 cycles, we may see a loss of more than one inch of average rain a year over the decades to come in comparison to 1971 to 2008 data (See Figures 25 to 27 below).

What is an inch of rain? Over decades and the lack thereof creates the chance of a "Dust Bowl". The "Dust Bowl" came at the end of the five warmer-cooler sunspot cycles of 1878 to 1932.

At that time, unaware of sunspot activity and influences on the earth's climate, researchers probably had no idea what was going on. They probably thought their data was "normal."

Little did they know the potential that was coming 60-years later as sunspot activity increased. Now, as history begins to repeat itself, there is a lot more population burden on the present water sources.

The Coming Global Cooling is Already Here

Looking at the bigger picture, each sunspot cycle has the life span of a child. The sunspot cycles that warms our century is the life of a human.

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COOL
16-16-16-16

The sunspot cycles that formed our warm earth of today took 300 years. Over 200 years of global warming was needed to erase the glacier in the fjord of Glacier Bay National Park.

However, since greenhouse gasses grew during the same time, those who do not believe in sunspot activity have greenhouse gasses to blame. The problem with that is as greenhouse gasses grow, the signs of cooling are falling and falling into place behind sunspot activity.

A recent science magazine printed a "glowing" report on how and why cows are one of the leading causes in global warming. In a rebuttal, I mentioned to the editor that a lot of cows would be needed to make up that difference in the lost of sunspot activity. Do to the failure of cows and lack of sunspot activity, global cooling would set in. They didn't print that one either.

When a sunspot cycle begins below *three* total sunspot mean for the first year, there is little chance of the cycle blossoming to a 600 sunspot mean cycle needed for a decade of major hurricane seasons as seen from 1996 to 2005. This was also a prime time for plant life and a growing population.

16-16-16-16

COOL
17-17-17-17

Now that sunspot activity has dropped, the earth does not have this benefit. Precipitation drops and temperatures drop. At this time, the earth needs a sunspot cycle of 600 to 800 total average mean to maintain the present comfort zone that is considered to be terrible by global warming alarmists.

That is not bound to happen. To our detriment, our Congress argues over greenhouse gasses that feed our topography.

They have been led to believe that greenhouse gasses are warming the earth. In several years, they will wake up to the "cold" facts of global cooling and that global warming was good.

We will be too deep in debt. We will be late in the timeline, be behind in the power curve and lack the resources to correct the situation. The situation will be in the near future a lack of water and food for a population that wasn't here in 1700, 1800 or 1900.

As stated, the last three cycles were in decline (See Figure 11). The present cycle is not a glide path in comparison to the last three.

This cycle is more like a cliff. There is no accurate weather data prior to 1890. This cycle has the same slow starts of 1710 and 1810.

17-17-17-17

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COOL
18-18-18-18

Thus, patterns holding true, weather data should drop below 1890 to 1932 records sometime in the next ten to twenty years. Again, how will greenhouse gasses slow this down? Will the affect take 14 years or will the lack of sunspot activity accelerate the drop?

In1914, there was only one tropical storm in the Atlantic, which came after three of the five smaller sunspot cycles and during a period of near zero sunspot activity. Therefore, the number of named storms should drop to one or zero at the end of this cycle or at the end of its twin-cycle 20 to 25 years from now.

According to D'Aleo, this cycle that we have entered has a twin cycle. The cooler sunspot cycle that began January 2008 could be the beginning of a cooler period lasting 20 to 50 or more years before global warming begins again.

Future Expectations

The last global warming period of sunspot cycles began in 1934 and stopped in December 2007. What should we expect in the near future?

As the earth cools, there should be a steady increase in Polar Region ice packs and glacier activity. The drought conditions will match sunspot cycle activity.

18-18-18-18

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COOL
19-19-19-19

As temperatures drop, glaciers and Polar Region ice packs collect more frozen water. Then add in population growth over the last 70 years.

The results should be another "Great Dust Bowl", shorter growing seasons and crop losses due to colder temperatures. This should have a great impact on our population.

If the D'Aleo adjustment is true, the three centuries of overall global warming will block a return to the 1700 ice pack area of mass for some time. The glaciers and Polar Regions ice packs will recover a bit, but in the long-term, they have lost overall size. It took 300 years of strong sunspot activity to warm the earth's climate to some of the highest temperatures as seen in the last sunspot cycle.

Worst Case Scenario

While watching the TV one evening in the last few years, a narrator for the a documentary on the History Channel stated that during the Maunder Minimum, also known as the Mini-Ice Age, that scientists and historians believe that 70 million people died in Europe and Asia from the affects of the cold. Millions died in Europe alone due to the lost of village crops and cattle from freezes according to Scott A. Mandia, who wrote the "The Little Ice Age in Europe-Influence of Dramatic Climate Shifts on European Civilizations, The Rise and Fall of the Vikings and the Little Ice Age". Unfortunately, the cows couldn't keep themselves alive let alone cause global warming.

19-19-19-19

COOL
20-20-20-20

There were shorter growing seasons and farmers abandoned their villages. Maunder Minimum supposedly stopped in 1750. However, based on further review of the data and D'Aleo's writings, the Maunder Minimum may have stopped just before 1700. The first measurements in 1700 appear to mark the beginning of the 100-year cycles (See Figure 15).

Just 60 years later in 1760, with little global warming, Will and Ariel Durant describe in *Rousseau and Revolution* the severe winters in France. Villages lost their crops and peasants slept with their cattle to stay warm (maybe this was the start of the theory that cows cause global warming). Hungry wolves roamed the countryside.

In *The Pieratt Family History*, by James W. Davis, a drought struck Kentucky in 1816 (Dalton Minimum), destroying the crops during the growing season. These areas are in or above 40°N of the Equator, which tends to feel the greater affects of lower sunspot activity.

In summary, since 1890, the pattern of sunspot activity that peaked in the 1954 to 1964 sunspot cycle has created a pattern of warming and unbelievable hurricane seasons. Since then, Polar Region ice packs and glaciers have all but disappeared.

Other weather areas such as USA average winter temperatures, precipitation, number of named storms and accumulated cyclone energy match sunspot activity (See Figures 16 through 26). Now, sunspot activity has dropped from the peak of 948 total sunspot mean of 60 years ago to roughly 1.7 total sunspot mean as of June 2009.

20-20-20-20

COOL
21-21-21-21

There has been growing evidence that global cooling is here and is now reversing climate changes made over the last eight decades (See Climatecooling.org for numerous examples). The conditions for peak growing seasons are changing.

For example, there will be fewer hurricanes and tropical storms. Those storms clear the air and supplement our precipitation throughout the eastern United States.

This is new territory. There is no official data for what will happen in the next 20 years, just estimates. This cycle will look more like 1710 and 1810, but, because it is coming off a century of warm cycles, the only available data is from 1886 to 1932.

How fast will temperatures drop? Will the temperatures greatly fluctuate as they drop or will they steadily decline? How sharply will precipitation and the number of named storms drop?

Then there is the slight to mild growth in sunspot activity that should begin soon. How will that affect these numbers?

Is this what causes the fluctuation in the glide path? This will be an extraordinary time to collect data and see what is happening as the earth cools off? For sunspot data, see Figure 13 below.

Unfortunately, people look for instant gratification in ratios of sunspots to hurricanes or sunspots to colder winters much like picking up a hamburger, fries and coke at a local franchise restaurant. To detect climate change, one should measure

hurricane seasons and Polar Region ice packs and glaciers against sunspot activity.

Using the models below, state officials should measure their respective historical weather data for their region against sunspot activity of the late 1800s and early 1900s to better estimate the impact on their farms, ranches and population.

The overall problem now, with the present Federal and state deficits, some states have used Federal funding to remove debt due to a drop in tax revenue. There is too much Federal funding obligated elsewhere and the Federal government is deep in debt.

Further, it takes the Federal Government too long to turn around on a topic of debate. It took years for Federal funding to be approved to reroute the Kissimmee River and buy land to protect the Everglades.

Let's say aqueducts were needed for Atlanta to offset the drop in precipitation which could last 30 to 50 years. Without them, the population would have to disperse.

The project would require aqueducts to be built from the Ohio and Mississippi Rivers to the Atlanta reservoirs. Overall, the project would take 10 years before a yard of cement is poured. Does Atlanta have that long?

How long will it take a nation to realize that what was nice for oh so long, that was griped about by global warming alarmists, and eventually lined the pockets of a few, wake up to a lost of that which was so precious? We can't ship this overseas and we are closer to an ice age, than a land that was once dominated by reptiles.

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COOL
23-23-23-23

If leading scientists and universities believe that greenhouse gasses are the cause of global warming and have no thought of sunspot activity as having an affect on the earth, why should they look? Unfortunately, when major science magazines follow suit, our politicians and public have little to go on.

By the time the affects of global cooling is upon us, those who can make a difference, will already have made decisions to the contrary. There will not be much left that can be done to correct this.

Our economy and population are based on a robust number of sunspot cycles that provided superb growing conditions for our crops. Crops provide the foundation for civilization and precipitation has been in decline since 2004.

Our population has flourished and our economy once did. The USA is an empire in decline.

Those who have much to gain in new carbon taxes and the makers of ethanol don't realize that USA food production may be in jeopardy if the next two cycles bottom out. Then add in smaller growing seasons.

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COOL
24-24-24-24

Ethanol production may be brought to a halt to feed the homeless masses huddled in vacant malls and schools due to the affects of cold on the economy. Homeless, elderly, welfare recipients and fixed budget citizens will feel this first.

Any geographic areas above 40° north and below 40° south of the Equator will feel this the most. The citrus industry will also suffer which is around 27° north of the Equator. One or two large freezes could wipe out what is left of the industry here in Florida.

A migration of population southward can be expected and will overwhelm the social programs and resources of southern states. There could be some thinning of the herd.

Closing Thought

Speaking of herds, evolution has been preached, adaptation has been blessed, now Darwin may be put to the test. We have heard that animals are the best warning system for an earthquake.

Birds in the mines quit chirping when gas is present. A dog will stare at the spot where prey lies before charging.

Recently in USA Today, Alaska government asked Colorado State University to look into manmade toxin in deer herds near Kodiak, Alaska. The bucks in the herds are looking more like the does.

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25-25-25-25

"The bucks lack a scrotum of evident testes, have the body conformation of *does* and have antlers with unusually sharp points and abnormal retention of velvet" (USA Today, April 21, 2009, p. 8A).

If the cause is not manmade toxins, and there are no reasons as to why they are changing, then what is causing this? Maybe, this is the first observed precondition, evolutionary-adaptation taking place in herd of deer in preparation for a cold period. The first part would be for reproductive reasons.

The second part, as man leaves due to severe cold year round, wolf packs will return. The bucks appear to be adapting to what is coming.

The human is a different kind of animal. The human can dwell on the present, live in denial and, thus, ignore an instinct.

The US citizen should instinctively know that greenhouse gasses are not greater than the force of the sun. Our instinct should now be to lay the cards and facts out on the table.

Our instincts should tell us by now that there is more to the story than what we have been told. We should know now to ask the question, are we cooling down or warming up?

We are cooling down. The next question should be, "How cool?"

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Historical Appendix and Supporting Documents

Authors Note: All charts are built from NOAA, SIDC and/or Weather Tarapin data unless stated otherwise.

I. First Action.

While taking my final leave from the Army before retirement, the chart below was found on a sales table in a public library on southern Kauai in the winter of 2006.

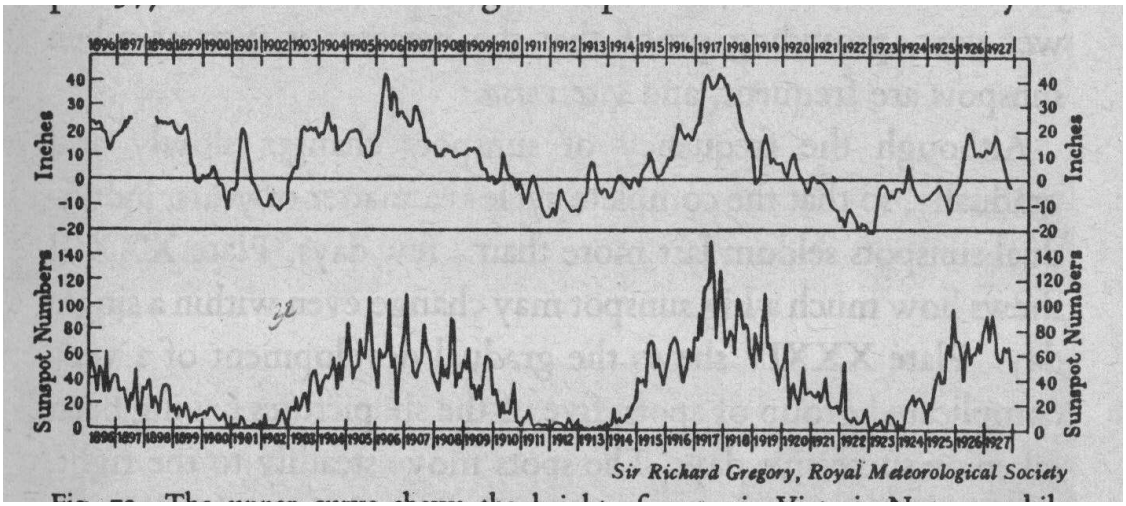

Figure 1 by Sir Richard Gregory. "The upper curve skews the height of water in Victoria Nyanza (Lake Victoria), while the lower skews the frequency of sunspots at the same time. We see that the curves keep almost perfectly in step with one another demonstrating that sunspots have an influence on terrestrial weather", states Sir James Jeans, Through Space and Time, page 159. Researched by Paul Pierett. Permission to reprint granted by Cambridge House Publishing.

The chart matches sunspot activity to lake levels of Lake Victoria. The work below is based on the work of Sir Richard Gregory. From April to August 2007, NOAA and Weather Tarapin hurricane data and SIDC sunspot data was rebuilt into the format of the slide above. The next two slides was the first correlation.

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A. First Correlation of Sunspot Activity to Accumulated Cyclone Energy

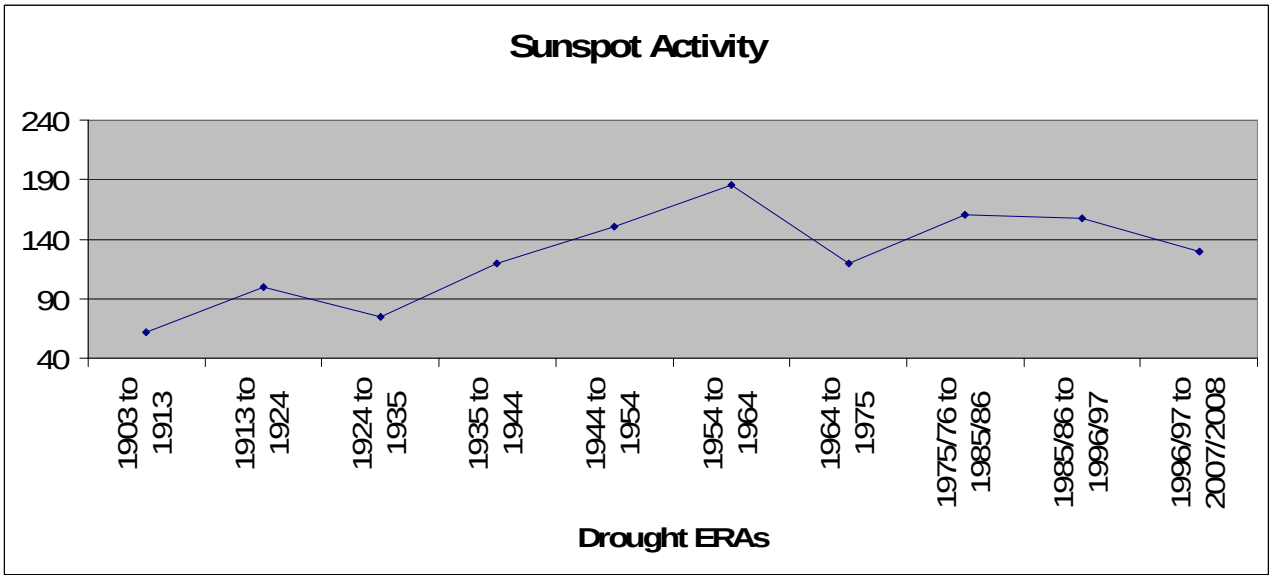

Figure 2 by Paul Pierett. Data is from SIDC.

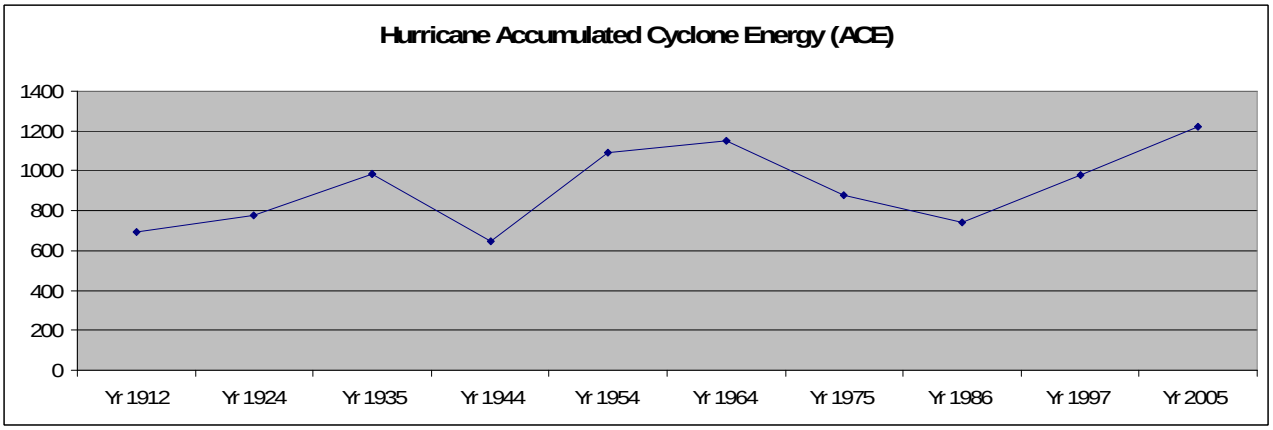

Figure 3 by Paul Pierett. Data is from NOAA. Figure 2 and 3 are the first correlation work completed in August of 2007 after several months of regrouping data into sunspot cycle timeframes. Even there, web data was sparse. The next three slides below breaks the two slides above down into more detail. Similar slides were sent to NOAA, Hurricane Tracking Center, and Colorado State University at the end of December 2007. Later in the winter, they were sent to Florida water management agencies. The top slide states Drought Eras. When first measurements were made, they were based on which year drought was predominant. The measurement was from drought period to drought period.

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B. Second Correlation of Sunspot Activity toe Accumulated Cyclone Energy

The three slides that follow are by year divided into sunspot cycles. By October 2007, the data was built by year and the following figures were produced.

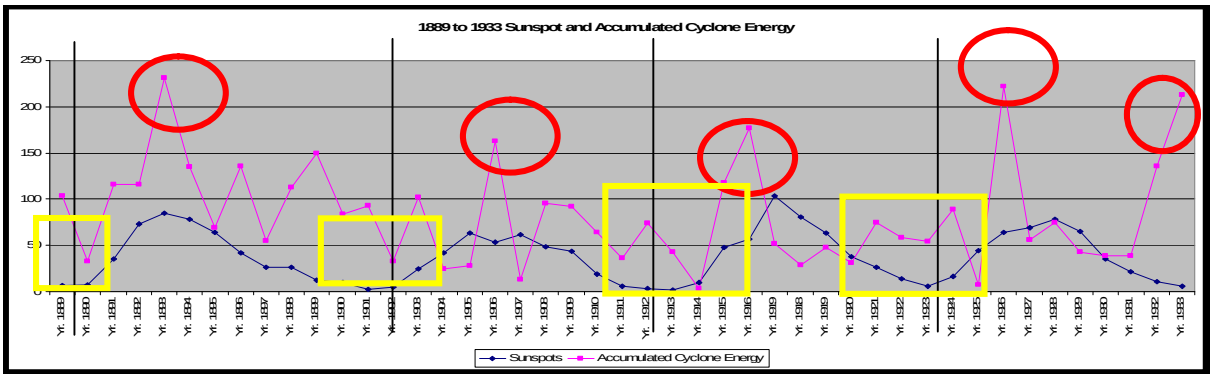

Figure 4 by Paul Pierett. Data is from NOAA and SIDC. First items noticed in this detailed correlation of sunspot activity and ACE is the beginning and end of sunspot cycles showed a major drop in ACE. Within a couple of years of a new sunspot cycle, ACE takes a jump. As years progress, this jump is quicker after the initial drop in ACE at the end of the sunspot cycle as seen in the next two slides. There are more double peaks as the sunspot cycles grow stronger. The cycles in the figure above are the cooler cycles in the late 1800s and early 1900s.

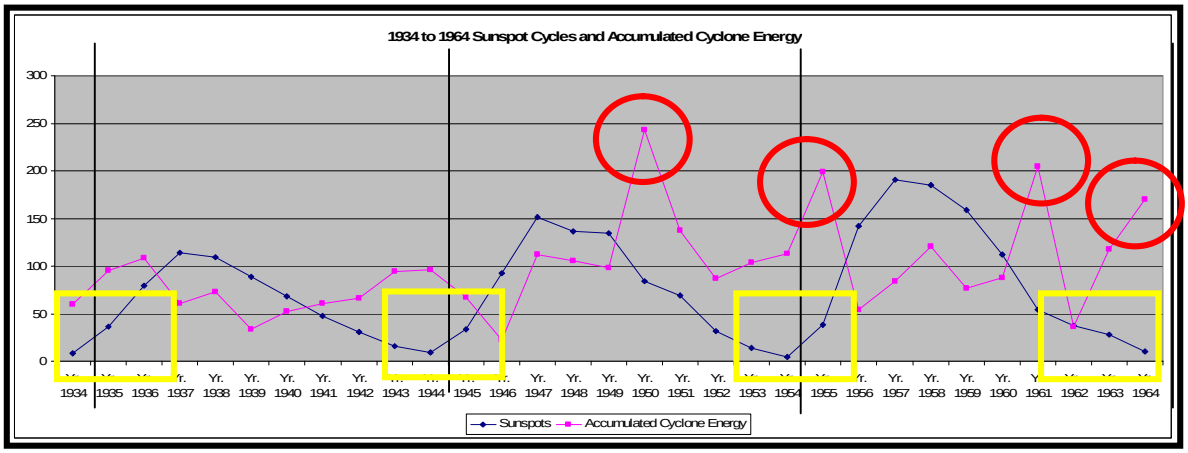

Figure 5 by Paul Pierett. Data is from NOAA and SIDC. In this next series of sunspot cycles, the cycles pick up strength and ACE makes new records. The drops at the end and beginning of cycles take on a new characteristic. There is not much drop in ACE though sunspot cycles drop in activity. Up to this time, there is not much tracking of glacier or Polar Region ice. It's interesting to correlate these stronger periods of sunspot activity to glaciers melting in the Glacier Bay National Park. The park has a map on their web site that shows each year where the fjord glaciers have been.

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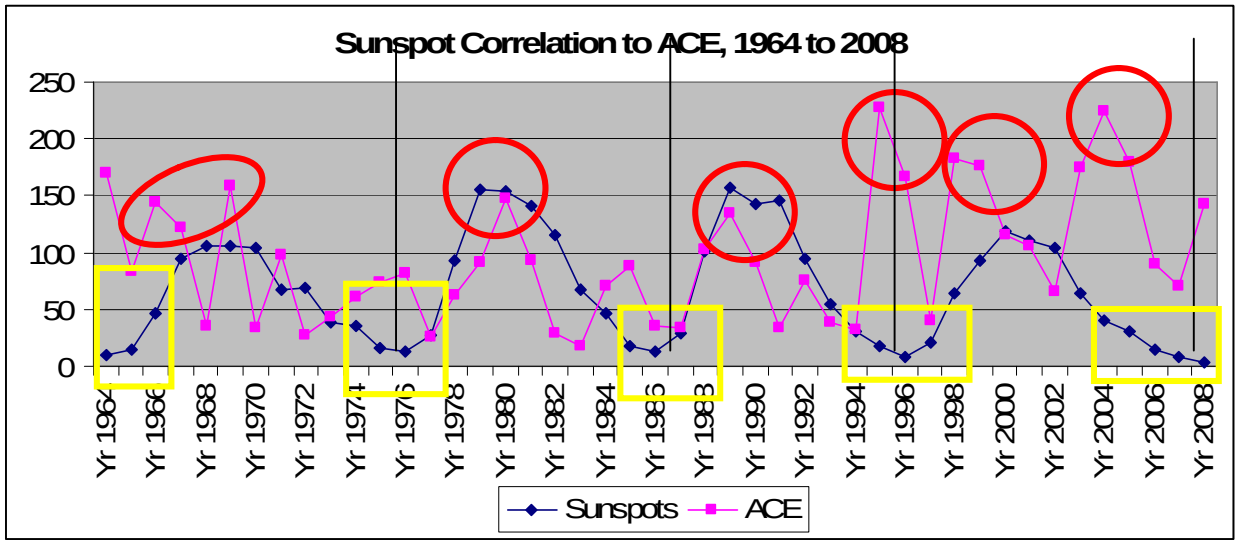

Figure 6 by Paul Pierett. Data is from NOAA and SIDC. Here is the famous myth shown in reference to global warming causing more storm activity. Well, it's not a myth. This last cycle was the mother load. There were two series of strong sunspot cycles, one shown in Figure 5 above and the one beginning in 1976 shown here. Though the last cycle was strong, the earth had warmed considerably giving the last cycle the conditions of severe named storms for several years.

The next comparisons show the relationship between total ACE and total sunspot mean for each year of a sunspot cycle. We always hear that a sunspot cycle is approximately 11 years long. Physicists are trying to explain the lack of perfect correlation, but for the amateur the data shows relationship. That's what this is all about. Where is the heat coming from? Simply, the sun and its sunspots are the cause of global warming.

No sunspots = Ice, dryer lakes, streams and rivers

Sunspots = higher temperatures, more humidity, higher lakes, more named storms and more precipitation.

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C. Correlation of Sunspot Cycles by Year to Accumulated Cyclone Energy by Year Using Data from 1890 to 2007

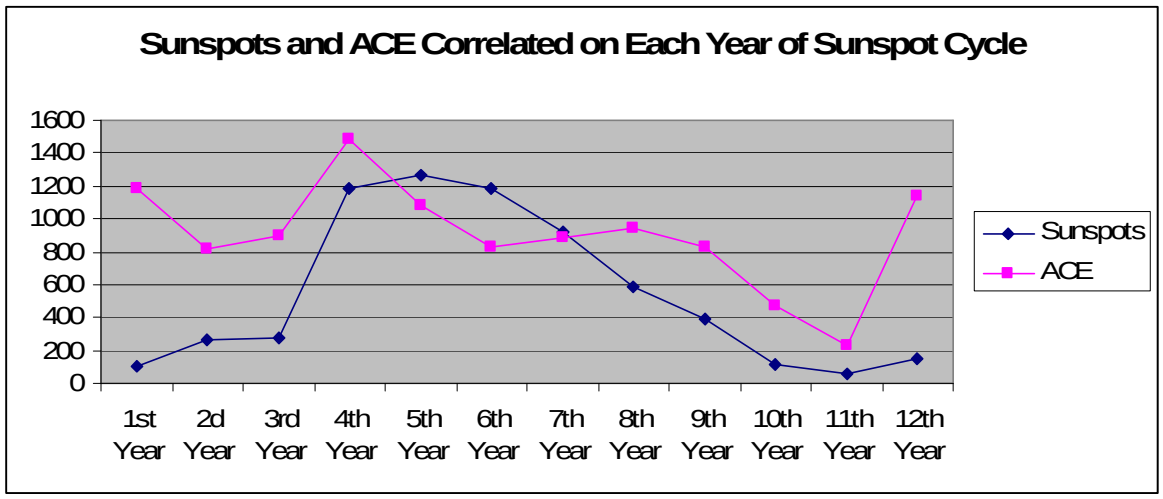

Figure 7 by Paul Pierett. Data is from NOAA and SIDC. The line graph above shows the average total of each year of sunspot means and average total ACE for the same year. This is the detailed graph. For area graphs, see below. The year was taken in a literal sense. If the sunspot cycle began in the middle of a calendar year, the data for the sunspot cycle began at that same point.

Year of Cycle	Sunspot Total Mean-Averaged	Total ACE
1st Year	101.8	1180
2d Year	259.7	819
3rd Year	278.1	894
4th Year	1191.2	1487
5th Year	1261.9	1083
6th Year	1190.8	825
7th Year	922.79	891
8th Year	585.96	939
9th Year	394.42	830
10th Year	116.23	474
11th Year	59.18	235
12th Year	148.5	1135

Figure 8 by Paul Pierett. Data is from NOAA and SIDC. Support data for figures in this section. One needs to be aware that each sunspot cycle finishes in a different month and a different year. Years 10 through 12 reflect finishing years. If they were combined together, the finish doesn't make much sense. For example, if one took all three finishing years and added them together, the totals would be in the area of 323 total

sunspot mean and the ACE would be1844. That is the problem physicists and meteorologists have with the numbers. Some believe the numbers should totally correlate. On the other hand, in a drop of sunspot activity, the push is gone. The hurricanes end up floating around the oceans building ACE numbers, while tropical storms form and hit the shore. The tropical storms only rack up a few points. There is a significant difference in the strength of the season, around the third through the fifth year of a cycle in comparison to the last year of a cycle. ACE measurement just becomes weak.

Sunspot Cycles by Year Compared to Accumulated Sunspot Activity.

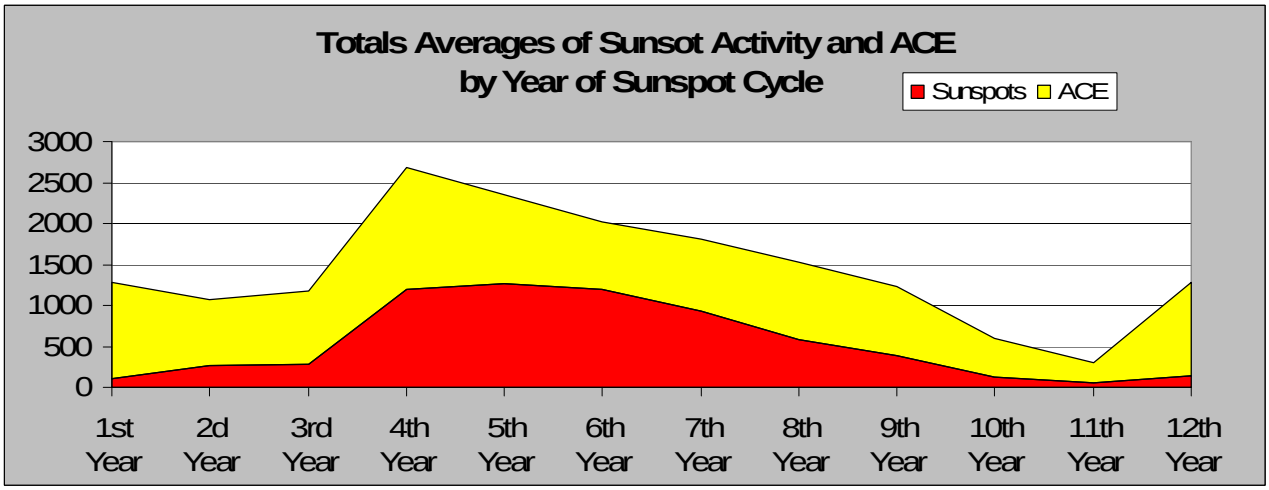

Figure 9 by Paul Pierett. Data is from NOAA and SIDC. This graph is an area graph of Figure 7 above. The graph reflects smoother contours and easier view of the correlation. If one looks at the 12th year, the ACE grows and the sunspots die out. If one looks at the 4th year when the cycle is strong, the ACE number more accurately reflects the strength of the cycle. Whereas, at the end of the cycle, the cycle is dying and ACE is growing. At this time, storms are wandering the oceans as much as two weeks creating high ACE numbers.

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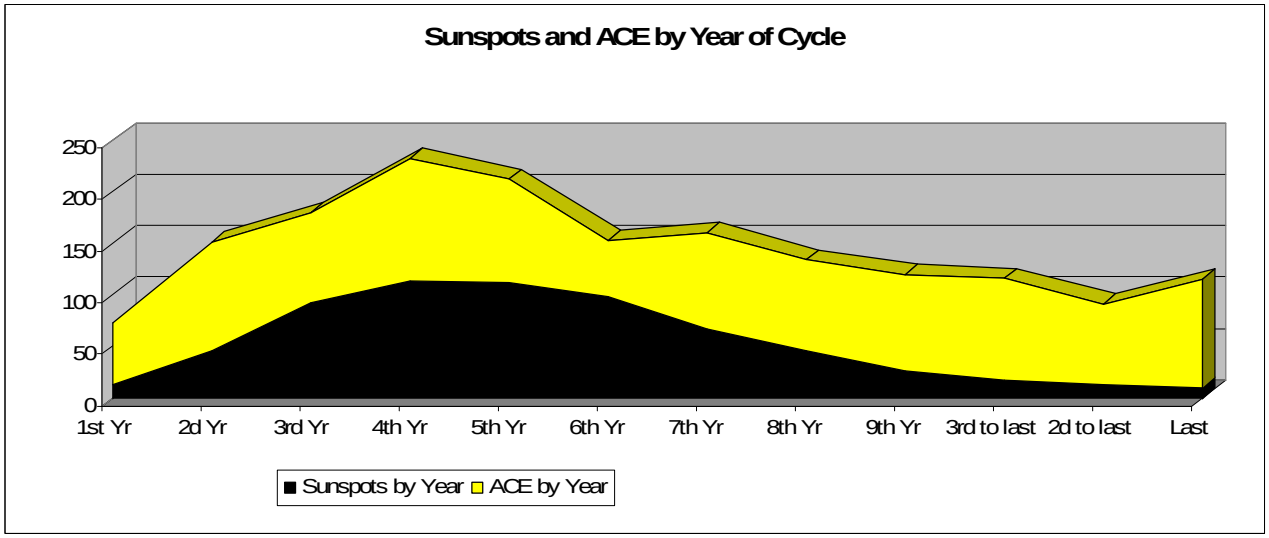

Figure 10 by Paul Pierett. Data is from NOAA and SIDC. As the correlations were being developed, the problem came up in showing the data. Where does one cut off sunspot data as the data affected winters leading up to hurricane season? Just shuffling the data six months forward or backward, this chart appeared. The cut off for shifting the data was 1 July of each season. If the sunspot cycle began before 1 July, the data applied to the present hurricane season. If the cycle began after 1 July, the cycle data applied to the following season.

In my first work, due to each cycle being different, a key point was how the last years affected the end of ACE. After watching the 2008 season, Hurricane Bertha spun out into the Atlantic Ocean and won about 79 ACE points. Tropical Storm Faye hit shore in a half dozen places. There was loss of life and property damage in the millions of dollars. Faye won about 5 or 6 ACE points. Something is wrong here in the measurement. At the end of a cycle, ACE just seems to measure airtime, not punch time. When these major storms came across Florida, mostly due to global warming peaks, ACE was climbing off the charts.

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B. Correlation of Sunspot Cycles to Accumulated Cyclone Energy and First Proof of Global Cooling.

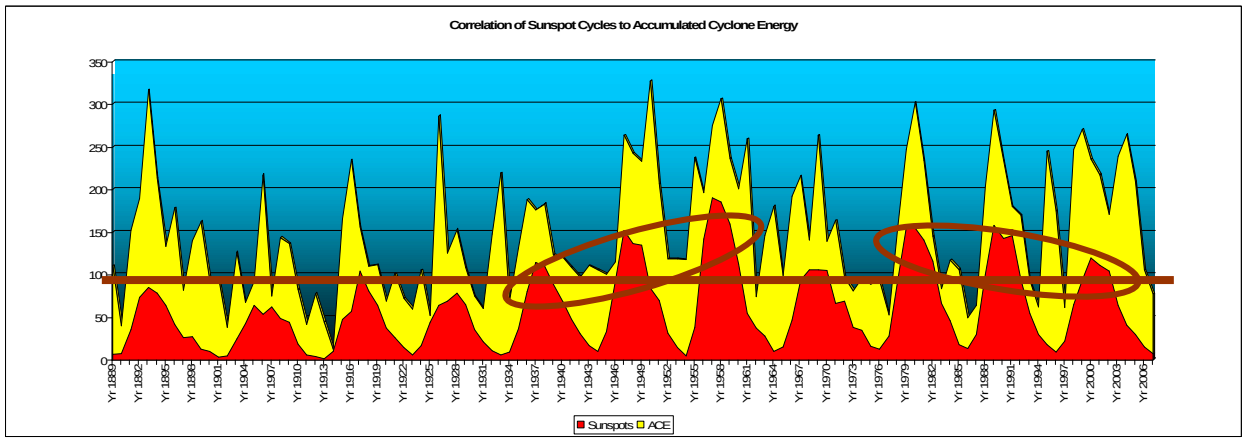

Figure 11 by Paul Pierett. Data is from NOAA and SIDC. By summer of 2008, I thought I was fully in tune to the affects of sunspot activity and the lack thereof and made my first predictions. All that is in a paper titled, "*The 2008-2009 Atlantic Basin Named Storm Report and Correlation of Sunspot Cycle Activity to Accumulated Cyclone Energy (ACE)," January 20, 2008.* Again, this went to the agencies above, several universities, my alma mater and quite a few others.

The cycle was not taking off, but the hurricane and tropical storm numbers kept piling up, blowing away my first prediction. By the end of the season, I was simply overwhelmed by the numbers and went looking for the answer. Somewhere in the USA average winter temperatures lies the answer. We are on a warm earth. The average winter temperatures for 2008 was 33.31° F. When examining the entire cycle, the last cycle from 1996 to 2007 had the hottest average winter temperatures of the century.

However, this chart with 2008 weak sunspot activity convinced me that we were in for significant change. I was not convinced until March of 2009 that we were into cooling down. I did not know why until a reader sent me a copy of Christopher A. Sawyer's commentary, *The Greater Good*, ADE+P, p 48. After reading that page and reviewing Joseph D'Aleo's work again, I had a better understanding of what was happening and where we were going. That resulted in this paper along with recommendations from another friend and reader. Joseph D'Aleo work clarified the observation in my first paper, *"The 2008-2009 Atlantic Basin Named Storm Report and Correlation of Sunspot Cycle Activity to Accumulated Cyclone Energy (ACE)".* Rather than just an observation, I now had a better interpretation of my two-year-old data.

Below is an interpretation of D'Aleo's work.

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II. Interpretation of Joseph D'Aleo's Work

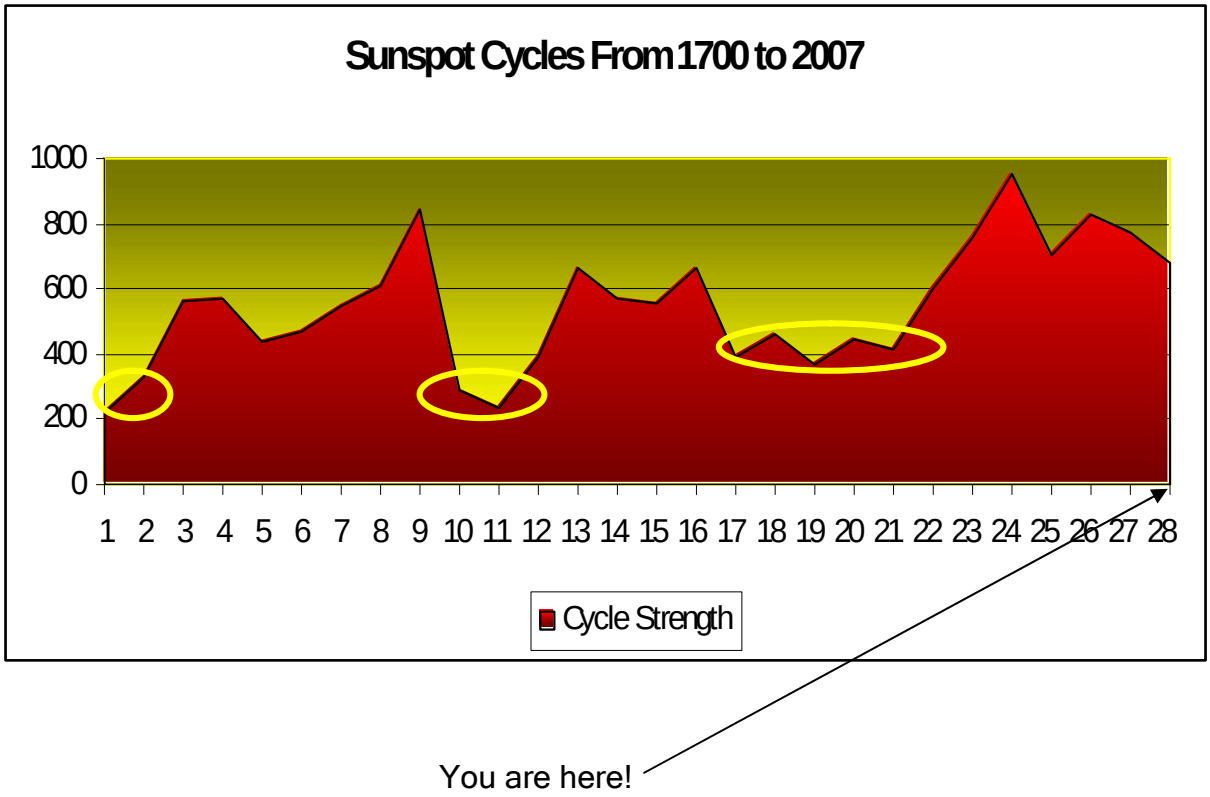

Figure 12 by Paul Pierett. Data is from SIDC. There have been 28 cycles since 1700 and have now entered number 29. The numbers on the left in 200 increments is the total sunspot mean for the total cycle, no matter how long the cycle existed. The present cycle is low (See table below for support numbers).

Cycle 25 fooled some scientists into a premature judgment that we were leaving global warming and entering an ice age. That is where Newsweek appeared. Newsweek published an article in 1975 stating that we are entering an ice age and Dennis Miller brought that to light in a Tonight Show with Jay Leno sometime in the past year or two.

For those who may be a little cynical, this paper may not have been possible 30 years ago. This 29th cycle made things easier. However, cooler cycles have a down side and that is in the last figure.

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Supporting Data for Figures Above

Per data since 1885, sunspot cycles below 500 total sunspots mean tend to have weaker hurricane seasons averaging 5 to 8 storms. Considering there were no satellites at the time, the numbers may be low. Data on ice packs was limited at the time. Glacier Bay's fjord glacier was first discovered in 1750. Since then, the fjord glacier melted away to the headwaters. There was some growth in 2002. Average USA winter temperatures were below 33°F in 2002. There was a slight dip in 2001/2002 sunspot activity. In 2001, there was drought conditions in Florida, USA; Hungary, Europe; and Africa.

Sunspot Cycles	Sunspot Cycles Total Means	Sunspot Cycles	Sunspot Cycles Total Means
Yrs. 1701 to 1711 No. 1	219	Yrs. 1878 to 1889 No.17	393
Yrs. 1712 to 1722 No. 2	325	Yrs. 1890 to 1901 No. 18	461.8
Yrs. 1723 to 1732 No. 3	560	Yrs. 1902 to 1912 No. 19	371
Yrs. 1733 to 1743 No. 4	567	Yrs. 1913 to 1922 No. 20	441.5
Yrs. 1744 to 1754 No. 5	440.7	Yrs. 1923 to 1932 No. 21	410.4
Yrs. 1755 to 1765 No. 6	466.2	Yrs. 1933 to 1943 No. 22	605.2
Yrs. 1766 to 1775 No. 7	546.4	Yrs. 1944 to 1953 No. 23	756.7
Yrs. 1776 to 1783 No. 8	606.8	Yrs. 1954 to 1963 No. 24	949.8
Yrs. 1784 to 1797 No. 9	846.3	Yrs. 1964 to 1975 No. 25	705.5
Yrs. 1798 to 1809 No. 10	286	Yrs. 1976 to 1985 No. 26	829.8
Yrs. 1810 to 1822 No. 11	235	Yrs. 1986 to 1995 No. 27	772.2
Yrs. 1823 to 1832 No. 12	390.2	Yrs. 1996 to 2007 No. 28	678.28
Yrs. 1833 to 1843 No. 13	663.5	Yr. 2008 No. 29 1st	2.8
Yrs. 1844 to 1854 No. 14	570.8	Yr. 2009 No. 29, As of June	1.7
Yrs. 1855 to 1866 No. 15	552.2		
Yrs. 1867 to 1877 No. 16	662.3		
		Accumulated Average	1.5

Figure 13 by Paul Pierett. Data is from SIDC.

The last sunspot cycle began January 2008. In 2008, there was a 2.8 sunspot mean for the 12-month period. If we round to 2.8 to three, the closest matching years are 1700 and 1800 per SIDC. The next closest is the 1913, but the first year of the sunspot cycle was 1.4 and the second year was 9.6. This cycle started with 2.8 and has now dropped to an average of 1.5. In the next six months, for this cycle not to be a small sunspot cycle, the cycle would have to see a burst of sunspot activity.

Is NASA too optimistic? There is no historical data to agree with the latest news release, *New Solar Cycle Prediction*, May 29, 2009. This sunspot cycle is not part of some glide path slope off the last three cycles; it's almost a cliff when one compares the total sunspot mean of previous sunspot cycles to the present cycle.

In terms of colder weather, at first it fluctuates. The cycle should grow somewhat unless we are entering a mini-ice age and that will cause the fluctuation. If we have a

weak cycle, the bad winters would kick in during the 6th or 7th year. Then the acceleration of cold and drought will be quite noticeable.

In the following slide is from SIDE and shows the detail of the present size sunspot cycle.

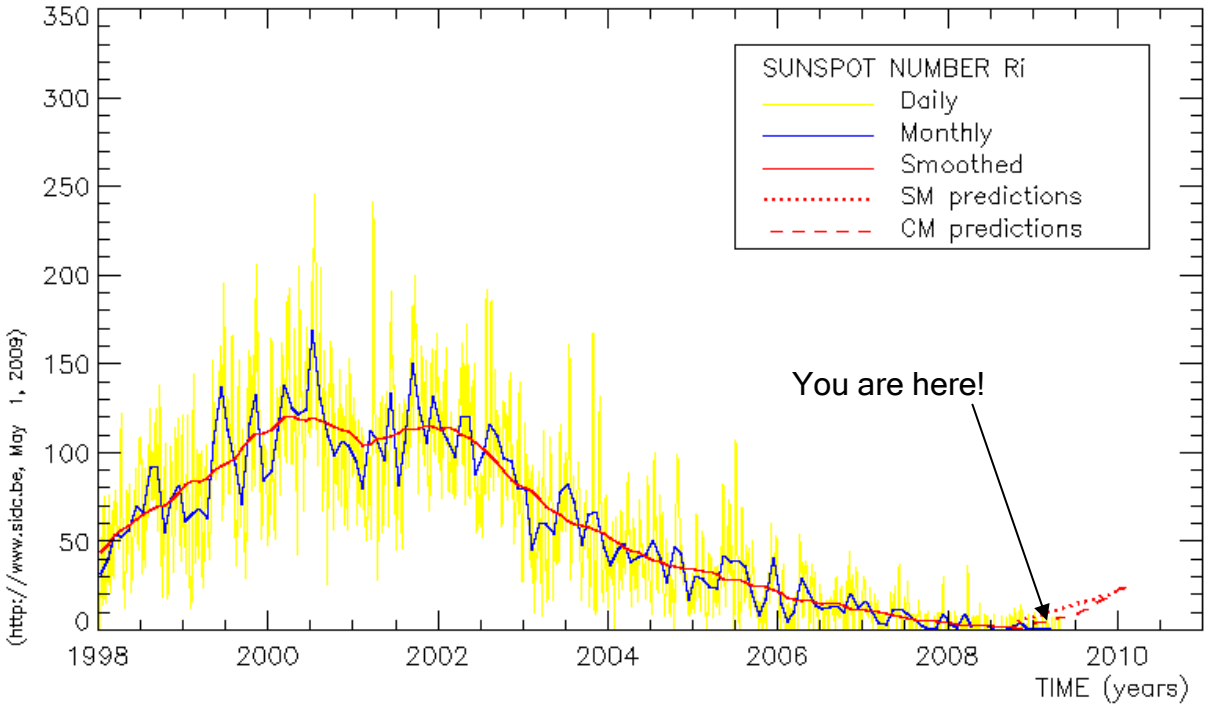

Figure 14 is by SIDC. Web Page: http://sidc.oma.be/products and, then, http://sidc.oma.be/html/wolfjmms.html. This is the last sunspot cycle without years 1996 and 1997.

Noted Climate Changes:

- Worldwide drought 2001 – Drop in sunspot activity
- Glacier Bay Activity 2002 – Average Winter Temperature in the USA is below 33°F
- USA drought begins 2004 and continues today, matching Sir Richard Gregory's work in Figure 1 above. As sunspot activity drops, lake levels drop due to a loss of precipitation.

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Each Century Broken Down per interpretation of Joseph D'Aleo's work

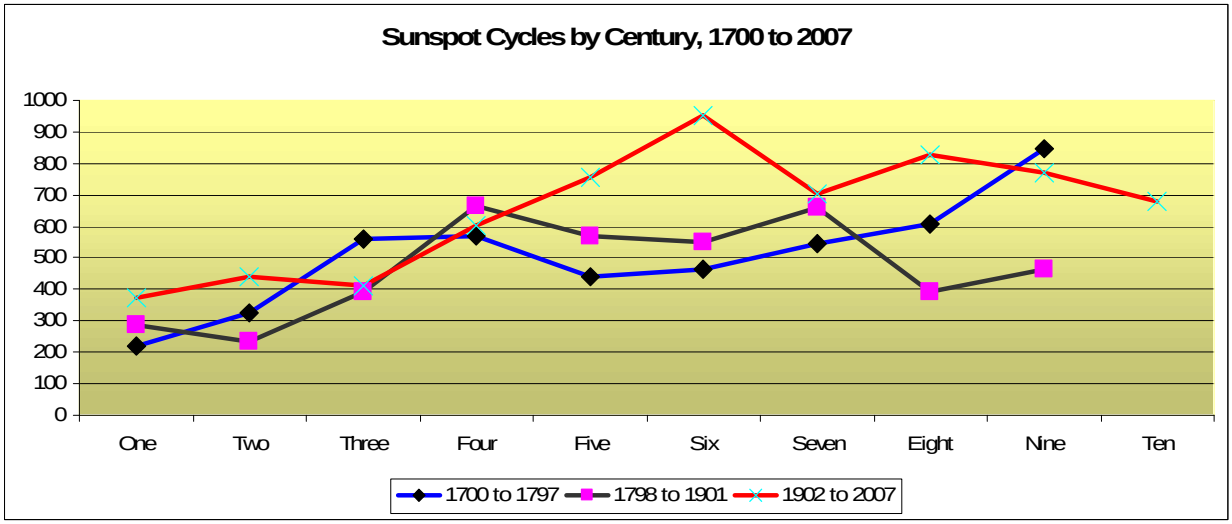

Figure 15 by Paul Pierett. Data is from SIDC. In this graph, each century since 1700 is shown. The 1700s are in blue with black dots marking the height of the sunspot cycle total mean. The century finally peaked above 800 at the end of the century. The following cycle dropped to below 300 total sunspot mean. The 1800s grew to the fourth cycle, tapered off and finally dropped in the eight and ninth cycles.

In comparison, the 1700s and the 1800s were considerably lower than the 1900s. The 1900s just simply overwhelm the data of the two previous centuries. The red line is the 1900s and that century's cycles grew and stayed above the other two. In addition, the 1900s continued to climb and the taper portion at the end was higher than the peaks of the 1700s and 1800s. Furthermore, the 1700s and 1800s had valleys; whereas, the 1900s had a major peak with its valley higher than the 1800s peak and had a high finish.

Continued on the next page.

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The below slides may be the scenario for the next 20+ years or so.

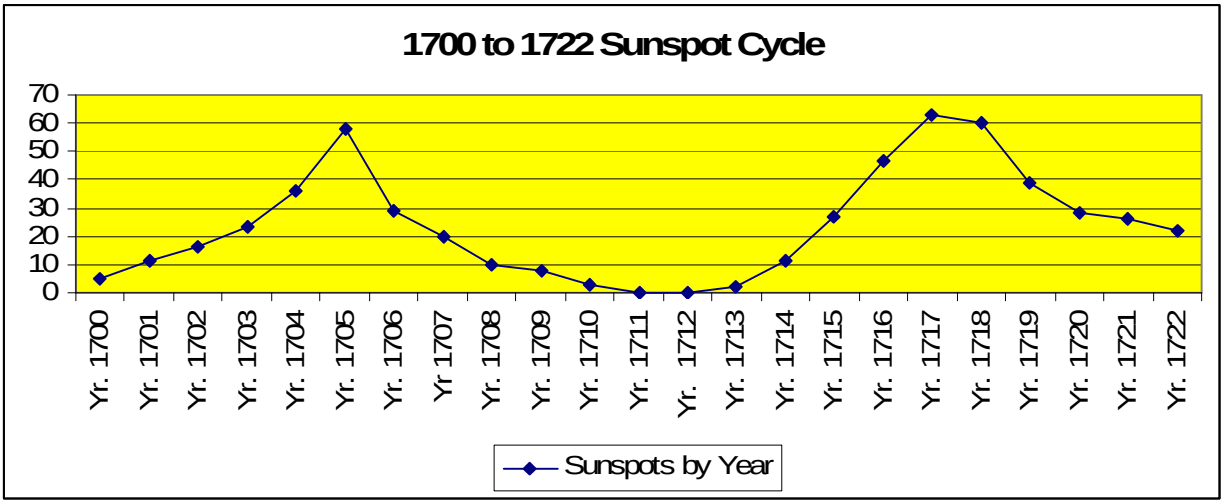

Figure 16 by Paul Pierett. Data is from SIDC.

Years 1700 to 1711 = 219 Total Sunspot Mean
Years 1712 to 1722 = 322 Total Sunspot Mean

Yr. 1700	5
Yr. 1701	11
Yr. 1702	16
Yr. 1703	23
Yr. 1704	36
Yr. 1705	58
Yr. 1706	29
Yr 1707	20
Yr. 1708	10
Yr. 1709	8
Yr. 1710	3
Yr. 1711	0
Yr 1712	0
Yr. 1713	2
Yr. 1714	11
Yr. 1715	27
Yr. 1716	47
Yr. 1717	63
Yr. 1718	60
Yr. 1719	39
Yr. 1720	28
Yr. 1721	26
Yr. 1722	22

Cycle break is somewhere in here.

Figure 17 by Paul Pierett. Data is from SIDC. This table shows the annual sunspot mean for each respective year.

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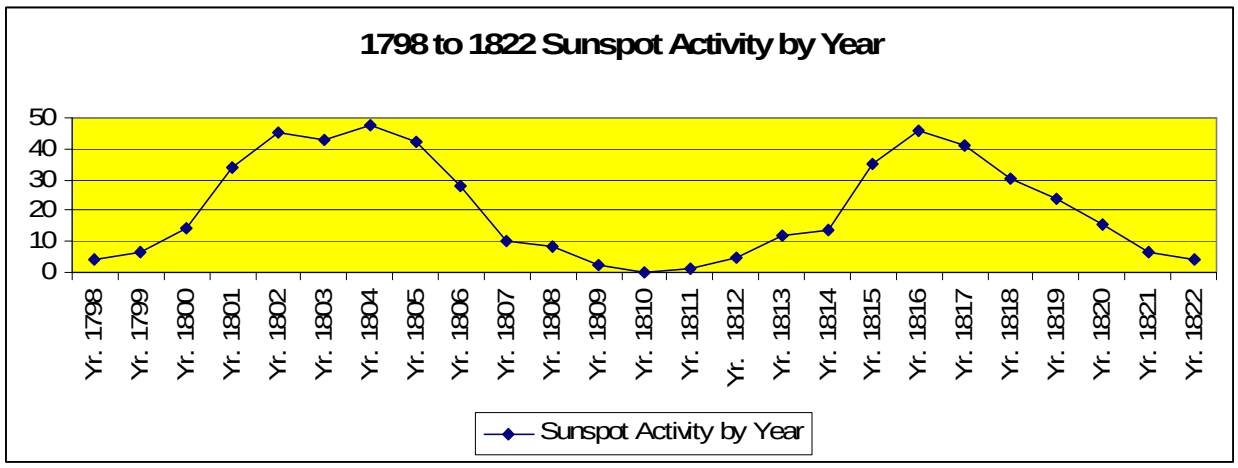

Figure 18 by Paul Pierett. Data is from SIDC.
is start of cycle Years 1798 to 1809 = 286 Total Sunspot Mean
Years 1810 to 1822 = 235 Total Sunspot Mean

Yr. 1798	4.1
Yr. 1799	6.8
Yr. 1800	14.5
Yr. 1801	34
Yr. 1802	45
Yr. 1803	43.1
Yr. 1804	47.5
Yr. 1805	42.2
Yr. 1806	28.1
Yr. 1807	10.1
Yr. 1808	8.1
Yr. 1809	2.5
Yr. 1810	0
Yr. 1811	1.4
Yr. 1812	5
Yr. 1813	12.2
Yr. 1814	13.9
Yr. 1815	35.4
Yr. 1816	45.8
Yr. 1817	41.1
Yr. 1818	30.1
Yr. 1819	23.9
Yr. 1820	15.6
Yr. 1821	6.6
Yr. 1822	4

Figure 19 by Paul Pierett. Data is from SIDC.

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Explanation for Data in the Following Charts.

The significant problem with showing hurricane season data is aligning it with sunspot cycle data. Where do you cut it off? I simply cut it off in the year it hits. The next cycle picks up the year where it starts.

Why? The previous year sunspot activity and solar heat retention develop the following winter temperatures. Those temperatures affect the Gulf of Mexico and Atlantic Ocean temperatures and atmospheric conditions for the hurricane season after the respective winter. Thus, 1913 sunspot activity and residual solar heat affects the 1913/1914 winter, which affects the 1914-hurricane season.

It would be better to straight-line it without sunspot cycle breaks and drop the sunspot cycle down a year, but the public needs it broken up by cycles for better understanding and a year is a year and one shouldn't move the numbers around.

Keep in mind the first figure shows all of the sunspot cycles that SIDC has data for on their web site. The cycles from 1878 to 1932 were stronger than the early 1700 and 1800 cycles. Much of the hurricane data is pre-satellite days.

C. Supporting Data for Global Cooling

Data for a Colder Sunspot Cycle That Was Warmer Than the 1710 or 1810 Cycles

August 1913 - August 1923

Year	Total Named Storms	All Tropical Storms	All Hurricanes	Major Hurricanes	ACE	Sunspots	El Nino	La Nina
Yr 1913	6	2	4	0	43	1.4		
Yr 1914	1	1	0	0	3	9.6	1	
Yr 1915	6	1	5	3	118	47.4	1	
Yr 1916	15	5	10	6	177	57.1		1
Yr 1917	4	2	2	2	52	103.9		1
Yr 1918	5	2	3	0	29	80.6	1	
Yr 1919	5	3	2	1	48	63.6	1	
Yr 1920	5	1	4	0	31	37.6		1
Yr 1921	6	2	4	2	75	26.1		1
Yr 1922	4	2	2	1	58	14.2		
Total	57	21	36	15	634	441.5		
Average	5.70	2.10	3.60	1.50	63.40	44.15		

Figure 20 by Paul Pierett. Data is from NOAA and SIDC. This cycle contains the *"one"* storm data. Previous year sunspots strength affects the following winter and the hurricane season following that winter. Thus, 1.4 sunspot of 1913 activity affected the one hurricane season of 1914. This is the beginning of the fourth cycle that was a group of five cycles that were weaker than the global warming cycles, but stronger than the early 1700 and 1800 cycles.

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Beginning Global Warming Cycle

September 1933 - February 1944

Year	Total Named Storms	All Tropical Storms	All Hurricanes	Major Hurricanes	ACE	Sunspots	El Nino	La Nina
Yr 1933	21	11	10	5	213	5.7	1	
Yr 1934	11	5	6	0	60	8.7	1	
Yr 1935	6	1	5	3	95	36.1		
Yr 1936	16	9	7	1	108	79.7		
Yr 1937	9	6	3	0	61	114.4		
Yr 1938	8	5	3	1	73	109.6		1
Yr 1939	5	2	3	1	34	88.8	1	1
Yr 1940	8	4	4	0	52	67.8	1	
Yr 1941	6	2	4	2	61	47.5	1	
Yr 1942	10	6	4	1	66	30.6	1	1
Yr 1943	10	5	5	2	94	16.3		1
	110	56	54	16	917	605.2	6	4
	10.00	5.09	4.91	1.45	83.36	55.02		

Figure 21 by Paul Pierett. Data is from NOAA and SIDC.

Peak Global Warming Cycle in the 1900s

April 1954 - October 1964

Year	Total Named Storms	All Tropical Storms	All Hurricanes	Major Hurricanes	ACE	Sunspots	El Nino	La Nina
Yr 1954	11	3	8	2	113	4.4	1	1
Yr 1955	12	3	9	6	199	38		1
Yr 1956	8	4	4	2	54	141.7		
Yr 1957	8	5	3	2	84	190.2	1	
Yr 1958	10	3	7	5	121	184.8	1	
Yr 1959	11	4	7	2	77	159		
Yr 1960	7	3	4	2	88	112.3		
Yr 1961	11	3	8	7	205	53.9		
Yr 1962	5	2	3	1	36	37.6		
Yr 1963	9	2	7	2	118	27.9	1	
	92.00	32.00	60.00	31.00	1095.00	949.80	4	2
	9.20	3.20	6.00	3.10	109.50	94.98		

Figure 22 by Paul Pierett. Data is from NOAA and SIDC.

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A Flat Cycle Amongst Giants

October 1964 - June 1976 Sunspot Cycle

Year	Total Named Storms	All Tropical Storms	All Hurricanes	Major Hurricanes	ACE	Sunspots	El Nino	La Nina
Yr 1964	12	6	6	6	170	10.2	1	1
Yr 1965	6	2	4	1	84	15.1	1	1
Yr 1966	11	4	7	3	145	47	1	
Yr 1967	8	2	6	1	122	93.8		
Yr 1968	8	4	4	0	35	105.9		
Yr 1969	18	6	12	5	158	105.5	1	
Yr 1970	10	5	5	2	34	104.5	1	1
Yr 1971	13	7	6	1	97	66.6		1
Yr 1972	7	4	3	0	28	68.9	1	
Yr 1973	8	4	4	1	43	38	1	1
Yr 1974	11	7	4	2	61	34.5		1
Yr 1975	9	3	6	3	73	15.5		1
Total	121	54	67	25	1050	705.5	7	7
Average	10.08	4.50	5.58	2.08	87.50	58.79		

Figure 23 by Paul Pierett. This rather strong cycle appears flat with a graph. After the end of this cycle, in 1979, the Artic Ocean had a maximum size in its ice pack. This was the first evidence that greenhouse gasses delay climate impact up to 14 years. As we see in the final cycle, climate change appears to drop to 12 or 13 years. Does cooling accelerate climate change?

Closing Global Warming Cycle

May 1996 - December 2007

Year	Total Named Storms	All Tropical Storms	All Hurricanes	Major Hurricanes	ACE	Sunspots	El Nino	La Nina
Yr 1996	13	4	9	6	166	8.6	1	1
Yr 1997	8	5	3	1	40	21.5	1	
Yr 1998	14	4	10	3	182	64.3		1
Yr 1999	12	4	8	5	177	93.3		1
Yr 2000	15	7	8	3	116	119		1
Yr 2001	15	6	9	4	106	110.9	1	1
Yr 2002	12	8	4	2	66	104.09	1	
Yr 2003	16	9	7	3	175	63.56	1	
Yr 2004	15	6	9	6	224	40.52	1	
Yr 2005	28	13	15	4	179	29.83	1	
Yr 2006	10	5	5	2	90	15.18	1	1
Yr 2007	14	12	2	2	70	7.5		1
Total	172.00	83.00	89.00	41	1591	678.28		
Average	14.33	6.92	7.42	3.42	132.58	56.52		
Yr. 2008	16	8	8	5	142	2.8		

Figure 24 by Paul Pierett. Data is from NOAA and SIDC.

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D. Sunspot Cycles and Precipitation

Data is from NOAA and SIDC.

In building the database, the first, 38-year group was built around the only available data for the cooler-warmer cycles of the late 1800s and early 1900s. The latter two groups were built on 38 years each.

Years 1895 to 1932 - Cooler cycles had 1006.58 inches of precipitation and an average per year 26.49.

Years 1937 to 1974 – The warming cycles of the 20th Century increased overall precipitation by 9 inches. Total precipitation was 1015.49. The average was 26.72.

Years 1970 to 2006 – The final warming cycles had 1049.09 inches of precipitation and an average of 27.93.

Timing of precipitation is crucial in agriculture.

Ironically, there appears to be patterns in the data and will be studied and placed in the 2009-2010 end of year, hurricane season report.

There is no such thing as normal rain. Interesting thought is if the sunspot cycles were to increase above 1,000 average sunspot activity for centuries on end, coupled with an elliptical orbit that pulled the earth closer to the sun, would this provide the climate that dinosaurs once had on earth?

Could the earth build a climate of a steam room? This looks possible. There does appear to be a transition 135 million years ago from reptile dominates earth to mammals. Best guess would be that the sun had sunspot cycles averaging 1500 to 2500 total sunspot mean for centuries on end during the earliest period of the earth 4,600 to 135 million years ago. See page 25 of *The Columbia History of the World* listed in the References.

This would give the total earth a constant atmosphere of 100% humidity. There would be no polar ice caps and no seasons. The earth would have been an incubator for life for 5,000 million years.

Staying with the original question from 2006: When can the earth produce a hurricane? Now, during the dinosaur periods was the earth in constant hurricane season, or, did hurricanes shut down? I'm thinking the latter.

Our global warming alarmists are worried about a little global warming. We are about to move into something that could be catastrophic. It won't take but a century to get here. We are in a time, unlike the dinosaurs, where we are on the balance point between long, cold winters and a good growing season. Ask a farmer about BTUs.

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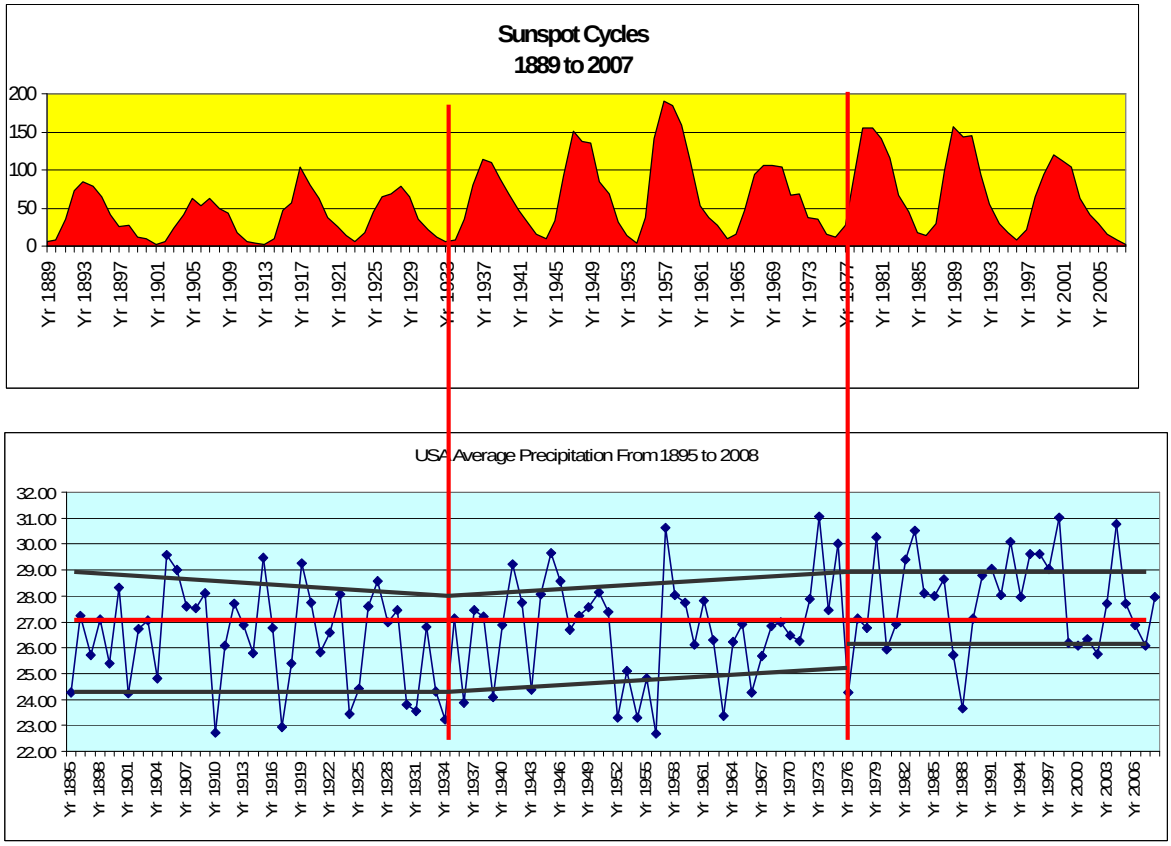
Sunspot Cycles and Precipitation, Continued



Figures 27 by Paul Pierett. Data is from NOAA and SIDC. During the colder cycles on the left side, there is a lower minimum amount of rain and a lower high. As the earth warms in the first hotter sunspot cycles, notice the compression at 1934, the year of the Great Dust Bowl. Years of lost of precipitation catches up with the USA.

Afterwards, there is a slight incline in the minimum and maximum amounts of rain and the numbers widen out. There is another major drought around 1952 to 1956. That is followed with major rain in 1957 as the sunspot cycle grows. There is another drought in 1964, on schedule.

Finally, in the right group, which is the highest known global warming period of modern man, there are higher minimums and a higher maximum of precipitation across the three sunspot cycles. As 2004 comes along, the last full cycle is tapering off. Major drought conditions set in across the USA.

The present sunspot cycle matches early 1700s and 1800s sunspot cycles, not the five warmer-cooler cycles from 1878 to 1934. There is no official weather data for this type of cycle. However, there is a significant change in this year's hurricane season that should be observed and correlated to this sunspot cycle. Unfortunately, this sunspot cycle is followed by a twin and, thus, agriculture conditions will be change and suffer.

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E. Sunspot Cycles and USA Average Winter Temperatures

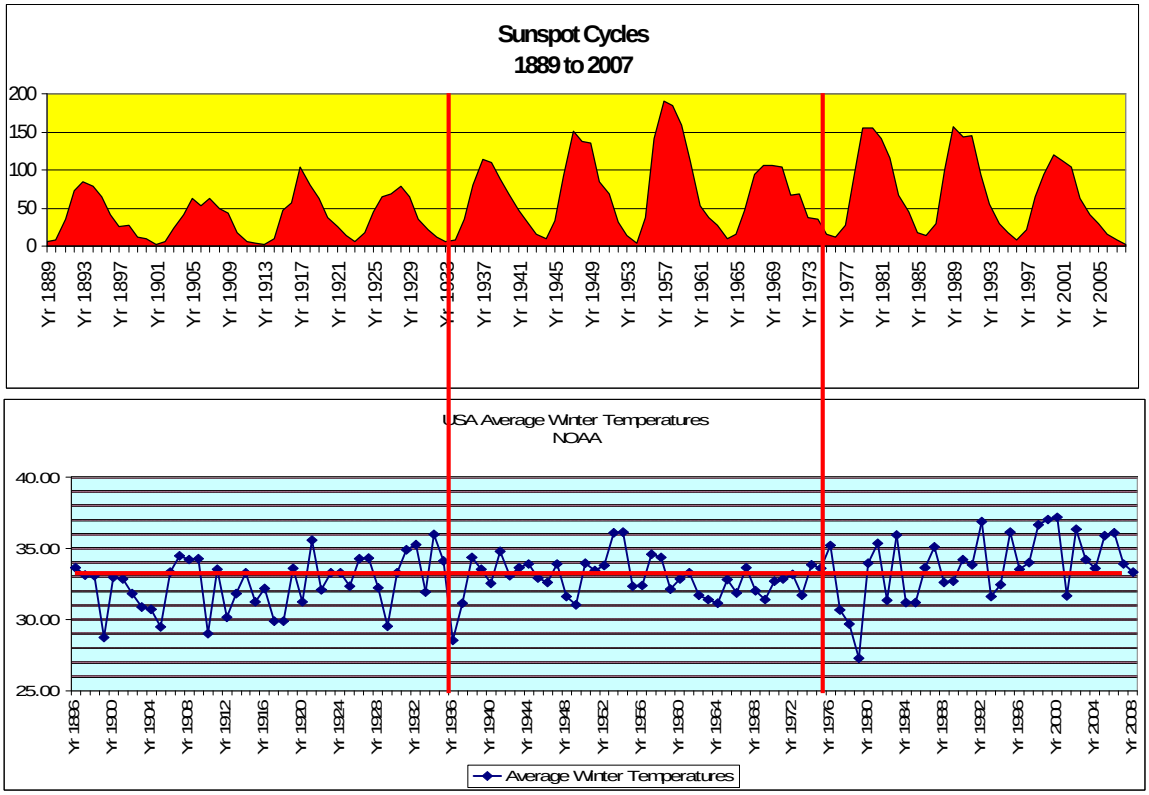

Figure 28 by Paul Pierett. Data is from NOAA and SIDC. During the colder sunspot cycles on the left side of the graph, temperatures tend to stay below 33°F. In the middle part of the graph, global warming begins. Here, average winter temperatures tend to hang around 33°F. As sunspot activity drops in the 1965 time period, which is a flatter sunspot cycle, average winter temperatures drop again below 33°F. There is a measurable increase in the Artic Ocean ice pack in 1979 when the USA average winter temperatures dropped to 27°F.

In the final cycles of the century, global warming continued to increase. Average winter temperatures in the USA peaked in 2000 at 37.17°F, which is dramatically higher than 33°F. That is changing. By 2008, the average winter temperatures dropped back to below 1996 average. There has been a downward trend since 2000 with fluctuation.

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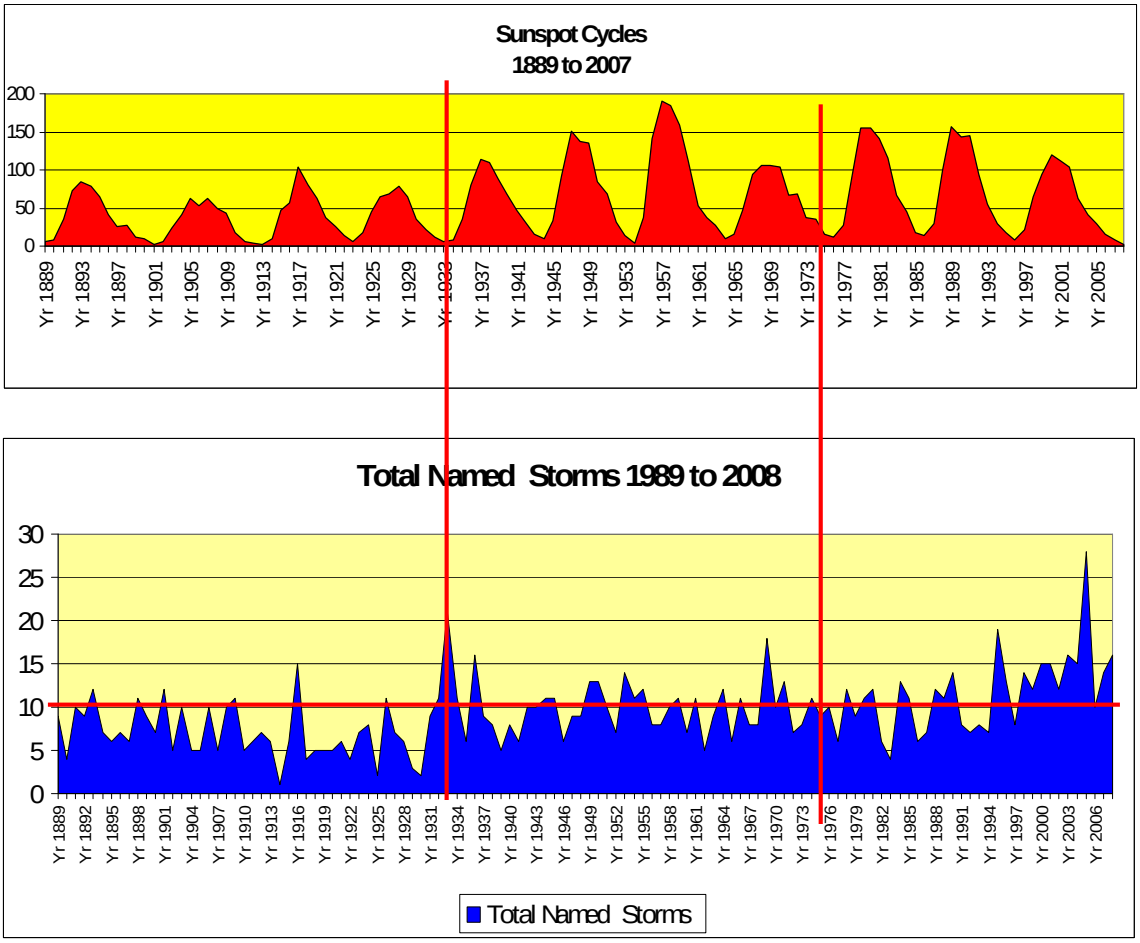
F. Sunspot Cycles and Number of Named Storms in the Atlantic Basin



Figures 29 by Paul Pierett. Data is from NOAA and SIDC. Watch the blue area (or shaded in black and white) fill up the open space. During the colder cycles, storms tend to happen around August to October. The average season is below 10. That number climbs and is more consistent each year. After the burst of activity, the sun has a flat cycle in the 1960s, which push the numbers down in the 80s. During the last cycle, the Atlantic Ocean produces as much as 28 storms in one year. Now, the hurricanes numbers are beginning to drop back to the numbers found in the late 1800s and early 1900s. The signs of climate change are beginning along with the national drought that started in 2004. The drought data matches Sir Richard Gregory's work in Figure 1.

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G. Sunspot Cycles and Accumulated Cyclone Energy

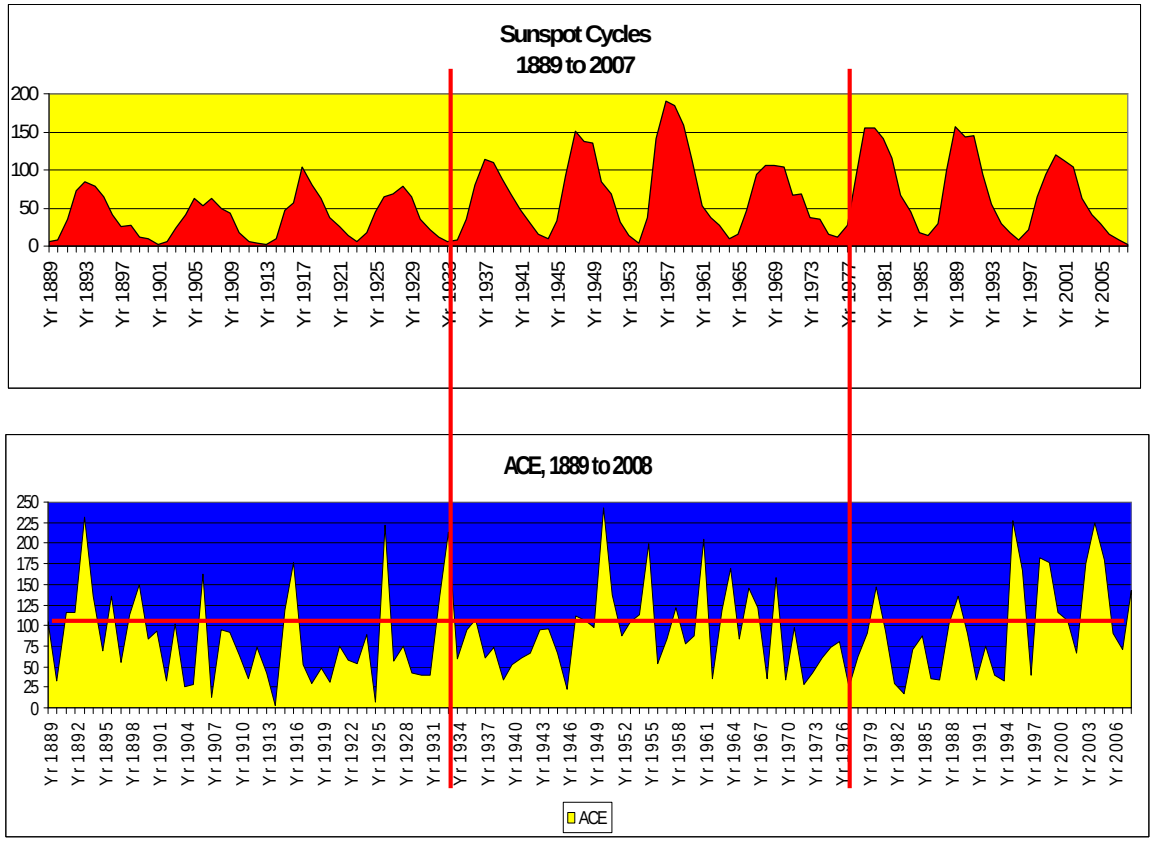

Figure 30 by Paul Pierett. Data is from NOAA and SIDC. In this section of measurements, ACE is broken out in comparison to Figure 2 above. One thing to keep in mind is there is an inaccuracy in ACE. ACE measures strength and endurance. During the mid part of a sunspot cycle, ACE tends to have a true measurement of the sunspot cycles strength.

However, at the end of a cycle, the sunspot cycle has dropped off. Here is where ACE becomes deficient. The sunspot cycle is no longer driving the storms. The storm fronts of the USA can turn a storm away. In this case, a storm can roam the sea for 21 days and run up the ACE numbers into double digits. A tropical storm can begin and hit shore in a few days. The tropical storm can kill and do millions of dollars in damage. The tropical storm may only have a five in ACE. Hurricane Bertha, 2008, at the beginning of a low sunspot cycle, spent two weeks floating around the Atlantic Ocean. As a major category hurricane, it ran up ACE points

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III, Basic Concepts How the Earth Warms and Cools and What Happens at Each Level

USA Average Winter Temperatures	Description	Best Estimate: Repeated Sunspot Cycles Strengths Close Elliptical Orbit
100°F+	5,000 million to 130 million years ago. Earth in Green House Affect	Total Avg. Mean 1500 to 2500
50°F+	Artic Ocean free of ice in summer 1. Year-round tropical storms, earlier season for hurricanes with regular category 4 and 5 hurricanes 2. Oceans rising 3. Expanding topography with more desert area, sub-tropic becomes tropic, forest move north due to lost in permafrost. Green house gasses at all time high due to Polar Region ice cap melt.	900 Plus Total Sunspot Mean
37°F	1. Last of seven warmest cycles in the series of warmer sunspot cycles 2. High precipitation/most powerful storms/most ACE/high lake levels/high green house gasses 3. Topography expansion	900 Total Sunspot Mean
	ITEMS REQUIRING HEAT, CONDITIONS ACCELERATE	
34°F	Begins to favor a "Punch" in Hurricane Seasons	
33°F	***The Balance Point*** All that is listed above reverses at this point. 33°F 1. Significant cooler or flatter sunspot activity 2. One Tropical Storm in 1914 after 3 cooler sunspot cycles 3. The "Dust Bowl" followed the final cycle of five cooler cycles .	600 to 700 Total Sunspot Mean
32°F	1. Glacier Activity in Glacier Bay National Park 32°F 2. USA average winter temperature, 1885 to 1932	400 Total Sunspot Mean
27°F	Polar Region Ice Cap Expansion is growing	
	ITEMS REQUIRING COLD, CONDITIONS APPEAR TO ACCELERATE	
Unknown °F	1. Yr. 1710, First known cycle after Mini Ice Age 2. Yr. 1810, Cold sunspot activity plus 100 years of warmer sunspot activity	200 Total Sunspot Cycle Mean
-22°F	1. Temp known to mass glacier ice (Ohio State University) 2. Mini-Ice Age: Glacier Bay and Greenland covered in glacier 3. Minimum sunspot activity	
Unknown °F	1. Ice Age with zero sunspots 2. Earth at max elliptical orbit from sun, Right axis tilt 3. Minimal greenhouse gasses, now stored in ice 4. Topography compressed 5. 40° N and S of Equator is now the living space for man and animal.	Zero Sunspots Earth in Elliptical Orbit Away From Sun and Unfavorable Axis Tilt

Figure 31 by Paul Pierett. Summary of Research, July 10, 2009

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