

The Changing Earth

Joshua J. Kelly

Dr. Nina Haydel

Liberal Arts Capstone (LIB-495)

17 December, 2010

Abstract

It has been broadcasted over and over that Global warming is occurring and if we don't do something about it we will end the earth. However with the information I am going to provide you I hope it will help you understand that we are just going through cycles of the earth. All will be well on planet earth. Like many other things in the world the news has jumped on this and painted doom and glooms day. But really is that what is going to happen to our earth. I will explain to you in detail the sequence of events that are happening on earth and give you all the information that is needed for you to decide is it really global warming or just the earth going through its cycles.

Contents

CHAPTER 1	Research Paper Introduction	
	Introduction and Problem Statement	1
	The Significant Impact of the Study	2
	Overview of Methodology	2
	Disclaimer and Basic Terminology	3
	Chapter Summary	3
CHAPTER 2	Literature Review	
	Introduction	4
	Literature Review	4-10
	Annotated References	10-11
	Chapter Summary	12
CHAPTER 3	Research and Methodology	
	Introduction	12-13
	Data Collection	13
	Summary	13
CHAPTER 4	Results of the Study	
	Introduction	14
	Summary	15

Contents (contd)

CHAPTER 5	Summary and Discussion	
	Introduction	16-17
	Discussion/Summary	17-18
	Works Cited	18-20

Chapter 1: Introduction

Introduction to the Chapter

Through our lives we have been introduced to the word Global Warming, I am going to do a research of what is actually happening and to clarify all the misleading that has been given to you about our changing Earth. I will use this paper to explain certain items about the change, such as human impacts on earth, secondly the sun's impact on the earth's change, along with the change in our weather patterns and what we can expect in the future. With all of these great resources available we will be able to see a trend that is happening and how it will continue to impact our lives.

Problem Statement

Main Questions:

- What is actually happening on planet Earth? Through this extensive presentation we will evaluate just that.

Sub Questions:

- What is the earth's cycle and how does it impact the Earth's changes?
- What are the different weather patterns that we experience on earth that influence the earth's change?
- How is the human's impact affecting our Earth's changing?
- What will the future hold for us on planet earth?

The Significant Impact of the Study

It's well noted that in the early 2000's Al Gore came out with a movie and a book pushing the American public to the belief of "Global Warming". With further research both by scientist and also meteorologist like myself we can really truly note that it is not global warming however just a cycle that the earth is going through. Early in the summer of 2009 it was found to be a leak in emails that were being released that slipped up and really didn't have the information to support global warming. Wow has it come to our knowledge now that we made one post-politician really rich with his influence and being able to sell all those items and also did we let the government get away with blown coverage in this Global Warming, Wow I am really ready to just let you sit back and enjoy this writing to show you the "Hidden Truth"

Overview of Methodology

This writing will be taken from both the facts that have been proven and also the basic knowledge that is known about the Earth's cycle. Also when needed I will include personal information to help support certain points of view on this topic.

Disclaimers

This writing will be wrote to support my views of what is happening with the earth and may at times be biased towards my own point of view.

Basic Terminology

Solar Cycle - this is defined as the time it takes our sun to go from a Solar Max to a Solar Min.

Solar Min- this is when we are receiving less incoming solar radiation to the earth.

Solar Max- this is when the maximum amount of incoming rays are heading towards earth.

El Nino- this is a time period in the earth's cycle where we see rapid warming temps in the Pacific Ocean.

La Nina- this is the time period where there is rapid cooling in the Pacific Ocean and also a increase in Atlantic Ocean Hurricanes.

Summary

The point of this paper is to show you all the facts that are hidden to you through the local news allowing you to get a full understanding of what is happening here on earth and will let you make your own opinion of what is happening.

Chapter 2: Literature Review

Introduction

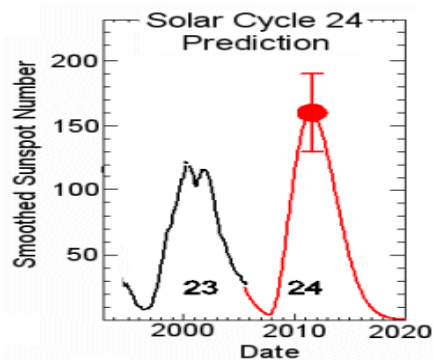
I will now introduce you to the material section of this paper. To do this we must first understand that the Earth is changing in great amounts everyday both by human impact and also by the earth rotating on its axis. What we will learn through this literature review will hopefully be enough to let you see for yourself the impacts and how they are changing.

What is the earth's cycle and how does it impact the Earth's changes?

The earth has a cycle that it travels through and it just happens that we are along for the ride in its up and down periods. They are more commonly referred to as solar max and solar min. Let's look further into Solar Max and what it means here on the face of the earth where we live. A solar max is when the sun generates a greater amount of solar activity that gets released into the atmosphere in the form of solar flares and solar storms, these flares and storms cause the sun to emit solar rays towards the earth (Abbott 473). All of these rays that enter the earth are increasing our solar exposure here on earth, which in return is leading to warmer than normal temperatures on the face of the earth. This is what I believe has led to the formation of "Global Warming", do I believe in this only to the extent that its impacts will soon be reversed and we will enter into a global cooling state in which the earth will begin to balance itself

out. So with that being said expect to see the weather patterns to continue to change along with our daily intake of solar radiation.

Below I have included a table that shows the upcoming next solar max which is forecasted to occur near 2012.



(Table Source: NASA)

As you can see Solar Cycle 24 predictions are for a larger max than what we had back in 2000. With this significant storm heading our way we are going to see potential power grid failures and GPS failures (Hathaway 1). Altogether we can expect to see impacts to our daily life with the satellite and communication possibly being interrupted. Also with all this incoming solar radiation we will see the Earth's atmosphere warm up. Now on to the solar min, and its impacts on the earth. For example lets look back at 2009 as we just came out of what is referred to as a deep solar minimum (Pesnell1). As mentioned above this was considered one of the deepest solar mins of the past 100 years. This impacted us through cooler temps this past winter for instance we recorded snow in all 50 states at the same time. This was the first time this had ever occurred. Also we seen cold temps extended down to the Florida Keys, we also

Kelly 6

experienced major damage to the fruit crops of Florida. So as you can see we recovered from this cycle and are now entering into the max. The reason that we see these conditions occur during a solar min is because the solar activity is at its lowest production. A example that we were in a solar min is that for the year of 2009 we started the first three months at about 87% sunspot free leading to such a cold winter that we just had (Pesnell 1). The best way to describe our sun is as its behaving a unexpected and very interesting way(Pesnell 1). What is meant by this is exactly that we don't know what to expect from our sun from day to day as it has a great cycle and impact on our earth.

What are the different weather patterns that we experience on earth that influence the earth's change?

First to identify this section we need to start with some terminology that will be used for this section. First is global warming and this is best defined as the rise of the earth's surface temp by 3 or 4 degrees Celsius per year (Ahrens 514). Next we have global cooling this is best defined as the earth loosing 2 to 3 degrees Celsius per year. Thirdly will be the term El-Nino and lastly is La Nina. So what is the cause of global warming is it really you driving your car down the road every day. Or is it all them fires that are polluting the air leading to our global warming. But it could also be possible to the orientation of the sunspot activity. Well to further evaluate El Nino we look at the effects it can have on us such as "El Nino has extreme power which can unleash epidemics that can alter the ecosystems."(Brownlee and Tanglely 20). A good example

of El Nino would be the year of 1998 and the record snowfall and spring flooding that occurred to epidemic conditions through the Mississippi River valley. But as before mentioned this is all part of the Earth's cycle and not caused by global warming or cooling. In fact the year of 2003 we saw the same type of conditions form with heavy winter snows leading to spring flooding again. A final example would be this past year of 2009-10 winter and all the cold weather patterns that were occurring through the United States. What leads to the formation of El Nino. El Nino is a periodic current of warm water flowing southward along the coast of Peru, causing the sea surface temps to rise according to the **"TheNew World Dictionary"**. Further examination to the leading of the cause of El Nino shows us that the major impacts are felt globally however the actual El Nino forms in the Pacific Ocean. How it occurs is the Trade winds relax causing the warmer waters to shift eastward and set up along the United States west coast and also more persistent along the coast of Peru.

Next, to talk about La Nina and its impacts on our earth's change. If we believe that the Earth is going through global warming then this is your phenomenon. La Nina is best defined as the reversal of El Nino or the return to normal. La Nina is the cooling of the waters off the Pacific Equator Region along the Peru coast (NOAA/PMEL). So as we can see this is just another effect on the earth's cycle. Some La Nina examples would include the event of 1997 were we seen record heat in portions of the United States. Another major impact of La Nina would have been the year of 2005 and all the massive hurricanes that hit and left destruction on the United States. With that being

said the latest forecast are for us to be entering another La Nina this fall and winter which will lead to the possibility of dry and warmer winters for many places throughout the United States. To further my evidence of these two events El Nino and La Nina, you see that these conditions lead to the renaming of the event from Global Warming to Global Climate Change and in fact I support this new concept. So you can now determine yourself if you believe in the concept of Global Warming based off the evidence I have supplied for you. So as we see there is both global warming and cooling happening on the earth it depends upon the cycle we happen to be on. This will go on for ever as long as we are here on the earth to feel the impacts. The only thing is we have to be ready for when the stronger max and mins occur because they will alter our lifestyles for a short period and it will be possible that we could see a miniature ice age in our life or our kids life.

How is the human's impact affecting our Earth's changing?

For this section we will look at what impact the human footprint is playing on the Earth's changes. The major impact that we humans are responsible for is the increase of carbon dioxide into the atmosphere. The carbon dioxide increase causes the greenhouse effect to intensify near the earth's surface (Lutgens;Tarbuck 334). However this carbon dioxide has been impacting the earth since the industrial age and we are able to overcome this difference on the earth still. However another thing that has lead to increase change on earth is the human's removing vegetation and turning it

into farm lands, causing more solar absorption to occur on the earth's surface warming the land. There is good evidence that we have been modifying our environment over thousands of years (Lutgens; Tarbuck 334). Also the humans have been cutting down many forest and tree embeddings causing us to lose are carbon dioxide purifiers in the

Kelly 9

trees. It is said that human species have caused the earth to go through a major change with the invention of fires (Lutgens; Tarbuck 334). So by humans increasing the amount of CO₂ into the earth's atmosphere we have lead to the warming of our near surface that we live on. Scientist have identified some trends that have lead them to believe the human impact is the largest reason for the Earth to be changing so drastically. Beside carbon dioxide causing the problems another lead is showing the human impact to now also include the introduction to more factories in and near the cities along with the introduction to the agriculture era which has led to the formation of what is now being reported as "Trace Gases" (Lutgens; Tarbuck 337). So as we can see the humans are having a significant impact into our daily earth change process. Another human impact that is causing change to occur on the earth is the building of damns which is interfering with the water cycle and causing some areas to have less water evaporation than others forcing us to see more drier areas and some areas a large increase in moisture in the atmosphere. A major thing that is causing us to not be able to pinpoint the climate change on human only is that we have noticed as mentioned before that the sun has a major impact also on the altering of heat being sent down to the earth, so as much as we want to blame the human it needs to be understood that the sun may be also causing just as much of the problem if not more. However human footprints can't be

thrown out of the equation as we have helped to alter our earth by cutting down trees and now our newest invention placing wind turbines throughout the country side this will also cause changes to our earth both good and bad. So this big push to go green with everything may eventually lead down the road to causing us to still create large amounts of damage to the earth without even noticing that we are doing it until we get the next scientist to step up and show the world that this go green is leading to problems in the future.

What will the future hold for us on planet earth?

To start this final section of research we are going to be combining our findings of the first three sections along with more details from other sources. So first lets look back at Section 1 we talked about the Sun and its impacts on earth, so as you could imagine that when we have increase in solar rays we can anticipate to see more warmer times on the earth in the future. Secondly we talked about El Nino and La Nina as being more major impacts again these two episodes will also come and go and continue to lead to Earth's changing through time. Thirdly we talked about human impact and also we are going to see this carry through the future on planet earth, however we do have more control over this event and with understanding and supporting Operation Green we could cause this to possibly slow down. So now lets examine with a little bit more research what else will be changing on earth outside of what was already mentioned. Studies have shown that as we continue to clear rain forest we are going to create a

unstable balance leading to more warming (Ahrens 517). Also another look shows that we are just continuing in our cycles on earth and that soon we will be met with a possible ice age again for the earth to start recovering from the human damage. Also possible impacts could be felt in the future as the Amazon River basin could go away due to the lack of trees to support the cycle, and also the ice continuing to melt in the polar regions may lead to a rise in the earth's sea level burying coastal cities such as New York City and all the major cities located along the ocean sides. More future outlooks may include the return of a ice age leading to the decrease in human population because of the human necessities being covered by ice and snow not letting us be able to plow the earth and create our food source that is needed. Along with the potential global freeze we still may run into a global shift in which I believe we will see a great vast change in our ecosystems, for example this past winter it was noted that animals from Canada like the great black bear where making there way further south than normal like in South Dakota. Also other animals have been migrating further south now form Canada making me believe that this change that is coming to the earth could be us heading into a deep global freeze soon that is balancing us out with the warmth of the early 2000's that has occurred on earth. This is more sincere support to my topic that the earth does go through changes and we are getting ready to go into a colder cycle very possible.

Annotated References

Scientists Predict Big Solar Cycle. (2006). Retrieved on October 16, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2006/21dec_cycle24/

With this significant storm heading our way we are going to see potential power grid failures and GPS failures.

Deep Solar Minimum. (2009). Retrieved on October 17, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/01apr_deepsolarminimum/

For example lets look back at 2009 as we just came out of what is referred to as a deep solar minimum.

Deep Solar Minimum. (2009). Retrieved on October 17, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/01apr_deepsolarminimum/

A example that we were in a solar min is that for the year of 2009 we started the first three months at about 87% sunspot free leading to such a cold winter that we just had.

New Solar Cycle Prediction. (2009). Retrieved on October 20, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/29may_noaaprediction/

The best way to describe our sun is as its behaving a unexpected and very interesting way.

What is La Nina. (2009). Retrieved on October 18, 2010 from

<http://www.pmel.noaa.gov/tao/elnino/la-nina-story.html>

La Nina is best defined as the reversal of El Nino or the return to normal. La Nina is the cooling of the waters off the Pacific Equator Region along the Peru coast

Summary

So I would like to end my research and let it be left for you to pursue what you think is happening on the earth as I have presented to you many major topics and how they have been unfolding in the Earth's cycles.

Chapter 3: Research and Methodology

Introduction

The next chapter is going to show all the sources that were used to accomplish the question at hand along with the sub questions that were being asked, as you can see sources consisted of the Internet along with hard cover books.

Main Questions:

- What is actually happening on planet Earth? Through this extensive presentation we will evaluate just that.

Sub Questions:

- What is the earth's cycle and how does it impact the Earth's changes?
- What are the different weather patterns that we experience on earth that influence the earth's change?
- How is the human's impact affecting our Earth's changing?
- What will the future hold for us on planet earth?

Data Collection

The internet was heavily used in this research to show how much of an impact the solar aspect will have on the earth now and for the future generations to come. Much of the data gained from the internet helped to develop this section to a understanding that can be seen towards the non-science level. Secondly, to answer the remainder of the questions, it is best noted that the resources provided through online and also hardcover books were in great value of helping to build the rest of this research to its strong point.

Summary

To be able to answer each of these questions and provide the necessary data to support these questions has in return, brought out some great understanding of what is happening on our earth and what we can and can't do to change things on the earth. Also we can further our understanding of what is actually going on so that we can see behind the science and actually what it means to us and our lives here on planet earth.

Chapter 4: Results of the Study

Introduction

Through the research that was conducted on this topic it was brought out clearly through different means that our earth is ever so changing and that maybe it's time for all the global warming people to sit back and understand the changes on earth. This will help prevent further episodes of fear in the global population that the world is ending. To reach this understanding I took it upon myself to go out and grab data from the internet along with other textbooks. Using these methods I found a lot of material to help support this thing called Earth's change. With each section of this paper information was brought forward to show that the earth is just going through a change in its life cycle. As we looked from the sun's impact all the way down to weather impacts on earth it has been presented for you to take your stand on what you believe is really happening on earth.

Main Questions:

- What is actually happening on planet Earth? Through this extensive presentation we will evaluate just that.

Sub Questions:

- What is the earth's cycle and how does it impact the Earth's changes?

- What are the different weather patterns that we experience on earth that influence the earth's change?
- How is the human's impact affecting our Earth's changing?
- What will the future hold for us on planet earth?

Summary

With the tools and research options that were used throughout this chapter to put the paper together we can see that by using multiple sources you can get a more sound understanding of what is really happening on the Earth and its changes. By using the different types of research I was able to get better answers to all the questions that I have asked throughout the chapter. With all the sources we can get a better understanding to our questions that have been asked. We can see that the earth is always going through different cycles and will continue to do so for years to come. Secondly we also notice that our weather patterns will continue to fluctuate through the years altering our weather patterns bringing false sense that we are heading into a global warming. Also research has helped us to understand that the humans impact on earth is not as much as we are told to believe in the changing of our earth. Lastly with the research done at hand we can see that our kids and their kids will continue to live on this earth and may experience periods of extreme heat and also extreme cold.

Chapter 5: Summary and Discussion

Introduction

For this section we will be taking a look back at all the material that was covered in this paper . We started by introducing some key things that were used throughout the paper. The first was our main heading which was to actually describe what was happening on earth and how the earth was changing. To understand this process we broke it down into some key statements. The first was what is the earth's cycle and how does it impact the earth in making changes. Second was what are the different weather patterns that are experienced on earth and what influence they have on the Earth's change. The next section was talking about how the human's impact was also leading to change on earth. Lastly it was brought out on what the future would hold on earth for us. Then in the third chapter we evaluated our sources that we used to gather all the data in the research paper. The major sources used where internet topics along with various hard cover books to gather all the data for this project. Our discussion in this topic lead to the evaluation that the earth is going through changes and that no matter what happens the weather will impact the earth's changes along with humans. Also it was brought out that the global panic that is occurring is maybe taking things to far and not in realistic meanings.

Main Questions:

- What is actually happening on planet Earth? Through this extensive presentation we will evaluate just that.

Sub Questions:

- What is the earth's cycle and how does it impact the Earth's changes?
- What are the different weather patterns that we experience on earth that influence the earth's change?
- How is the human's impact affecting our Earth's changing?
- What will the future hold for us on planet earth?

Discussion:

This paper was able to give a lot more in depth understanding with what is happening on our planet earth and what we can do now and what we should expect in the future. So after reading all of this data we can better see where the future lays for all of us on planet earth.

Summary

So final understanding is brought forth to use through all the extensive research and knowledge that we have learned we can better understand the questions at hand such as the Earth's cycle and how it will continue to happen over and over while the earth is in around. So we just need to better prepare ourselves for the times ahead in the earth's ever so changing style. Now we have also identified that the weather patterns on the earth will also continue to happen and impact our lives because they are just all part of the earth's cycle. Human Impact will be something that we need to live with for the rest of our lives and all we can do is better prepare our future generations for the changes that are going to occur both better and worst in the human impact area. And lastly a brief description of the future of the earth as you can see we used to have dinosaurs on the earth and they were sent away by a massive ice age which is part of the earth's changes so we may very well find ourselves in the same vote for years to come we just got to prepare. And by preparing for the earth's changes we can better understand and also be ready for what is going to happen. So the best thing to do is remember the earth is always going through changes. Your part is to be ready to shift lifestyles and be ready for whatever changes may happen next while you are living on this great planet earth.

Works Cited:

Scientists Predict Big Solar Cycle. (2006). Retrieved on October 16, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2006/21dec_cycle24/

With this significant storm heading our way we are going to see potential power grid failures and GPS failures.

Deep Solar Minimum. (2009). Retrieved on October 17, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/01apr_deepsolarminimum/

For example lets look back at 2009 as we just came out of what is referred to as a deep solar minimum.

Deep Solar Minimum. (2009). Retrieved on October 17, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/01apr_deepsolarminimum/

A example that we were in a solar min is that for the year of 2009 we started the first three months at about 87% sunspot free leading to such a cold winter that we just had.

New Solar Cycle Prediction. (2009). Retrieved on October 20, 2010 from

http://science.nasa.gov/science-news/science-at-nasa/2009/29may_noaprediction/

The best way to describe our sun is as its behaving a unexpected and very interesting way.

What is La Nina. (2009). Retrieved on October 18, 2010 from

<http://www.pmel.noaa.gov/tao/elnino/la-nina-story.html>

La Nina is best defined as the reversal of El Nino or the return to normal. La Nina is the cooling of the waters off the Pacific Equator Region along the Peru coast

Abbott, Patrick. Natural Disasters. San Diego: McGraw Hill, 2008. pg473. "Solar Wind."

Ahrens, Donald C. Meteorology Today. West Publishing, 2005. pg514. "Possible Consequences of Global Warming."

Brownlee, Shannon & Tangle, Laura. U.S. News and World Report. October 1997. pg17-20. "The Wrath of El Nino."

"El Nino". The New World Book Dictionary. N.P. : Thronike Barnhart, 1987.

Lutgens, Frederick K.; Tarbuck, Edward J. The Atmosphere. Prentice Hall, 1998. pg334. "Human Impact on Global Climate."

Ahrens, Donald C. Meteorology Today. West Publishing, 2005. pg517. "Possible Consequences of Global Warming."