

**ADVANCED METAPHYSICS
THE MIND OF GOD AND FORBIDDEN KNOWLEDGE
INTRODUCTION by DON TETTERINGTON**

1) I FULLY EXPECT VERY HEAVY CRITICISM WHEN PEOPLE START TO READ THESE NOTES.I KNOW THAT ANY SCIENTIFIC IDEAS THAT DO NOT AGREE WITH PRESENT PHILOSOPHY IS AT BEST SIMPLY IGNORED.THIS IS NOT A UNIFIED FIELD THEORY.IT IS SIMPLY A COLLECTION OF IDEAS ABOUT THE UNIVERSE.I DO KNOW THAT THESE IDEAS WILL RUB A LOT OF PEOPLE THE WRONG WAY.SUCH THINGS GO CONTRARY TO POPULAR BELIEFS BUT IN THE END SCIENCE GAINS.I will do my best to answer any of your questions,explain any point that might be obscure,or not quite understood,if possible,should the need arise.Science is about learning.I believe that this project is on sound,firm mathematical and scientific ground.This is a work in progress and it is constantly changing,sometimes many times by the minute.This is only the word file.The actual program alas must remain with me and my computer.

There is something about this program that gets to the very heart of what we call the meaning of life,what everything is all about,the why's and even the who's.This is important because everyone wants to know the why's the hows of why we are here,what life is really all about.Everyone needs to know where they stand in the grand scheme of things.But I can tell you that we are very small wheels in a very big operation but we are never the less very important in the scheme of things.This program I expect will be eventually posted on a wd site as more information is gathered,maybe once every month or so,for as long as possible or until the program completes it's course.I have no idea when that will be.There is one extremely important point that has been discovered throughout this program and that being that everything we see in the universe exists because the laws of physics demand that this is the way things must be and as for the laws of physics themselves,they too could be no otherway than what we have now.In other words things are the way that they are because of design.

2) To begin with this is a extremely difficult program to do,made much harder when the computers would frequently fail because they could not handle the program.This program so far has gone through six computers in the course of seven long years.A couple of times the hard drive failed for no apparent reason.Right from the very begining I knew that I was not in control of the program.Parts of the program would just simply disappear without me being aware of it,or edit itself.It wanted to do what it wanted to do and there was no going back.It was very disconcerting.There were even one computer that suddenly started ticking loudly like a time bomb at three in the morning and then a fire started inside it,with a great deal of smoke.I have no idea to this day what that was all about but I knew that it was done.The program I suppose went to wherever programs go when they are finished.

Several times all the information was lost,far beyond any attemp at retrieving it and the program would have to start all over and many months of work would be lost.Why didn't you have a back up - you say? But I did but it seemed to make little difference.They too failed at the most inconvenient of times,usually at the sametime the computers failed.There were numerous times when important key points of information were simply denied access to me,that the file had somehow changed,with no keys having been touched by me or anyone else.

However now it is now at a very advanced stage inwhich backup is now not necessary.It has gone far beyond anything anyone could have ever imagined and is far ahead of late twenty century physics.The program is capable of having questions

asked of it and answering back. However sometimes the response is in mico seconds. Other times it is in weeks. Sometimes it doesn't respond at all. The program however seems to enjoy having questions asked of it and being in the spot light.

However this program is only to be interested in finding out the secrets of the universe. It does not know about our world or what goes on in it, nor does it care. I was very careful not to add such things to its program. Right from the very beginning this program has never had access to the internet, or even a child's book on physics. Everything was done from scratch and that has made it a much purer program, free of other people's opinions, which I know it would've freely accessed and used, if it could have and everything would've been not quite up to snuff. I have done my best to supply the program with any information that it asked for. However much of the information is simply not available in this century. This has made it very difficult to get what was needed. Even the best of the best mathematical minds will find things hard to understand, if not outright impossible.

3) Much of the higher mathematics appears to be easy to solve when first looked at but are actually extremely difficult. Later on the concept of the uncertainty of the entire universe itself will have to be addressed.

Someone once suggested that the universe is much more stranger than we as humans can suppose. They were right and I expect this program eventually to stretch our imaginations right to the limit and beyond.

4) One other point must be taken into account and that being that as the program gets more and more complicated there are many more factors to be taken into account. This program started out using only a few factors to start with. Now these factors are in the ten's of thousands. Because of this the program has started to slow down noticeably. Each factor and point of the program must be cross referenced not one but hundreds of times. As you might imagine this takes time. There were lots of things this program came up with what appeared by all accounts to be perfectly right theories but when the dust settled and the math was done, the idea would be proven totally false and ended being a dead end. I have always wondered if the universe itself has gone through many dead ends, only to forget the concepts. Equally certain things have over the years been deliberately erased from the program. I see no reason to create a bomb that would convert all matter, any sort of matter, into pure energy instantly. Even a atomic bomb could not do that. Such a bomb could in theory, if set off on our sun, would convert our sun instantly into pure energy and would be strong enough to knock out alpha centauri out of its path, so powerful it would be. Since most of the effects would be in the form of gravitational and magnetic effects. The effects would be in a instant noted and make the greatest super nova that ever occurred look very tame indeed. Mankind will never have need for such knowledge. In my book such knowledge is forbidden. Since we have not observed such a event elsewhere, at least to our knowledge, then others out there I assume have no use for such devices either.

5) Finally along the way something very important was learned. I believe that there is a much higher power than mankind, that was the real one in control of this program known as the overseer - God. As for God, Allah, Babba, the man upstairs and too many numerous other names people know God by throughout the universe, it was made quite clear who God is right from the very beginning. The first point to be made is that God is the spirit, the shepherd, the guardian of the universe. As the universe grows and develops, so does God. We as humans have bodies. God's body is the entire universe. This really what life is really all about, growing and understanding everything. One thing I have learned about babba is that he has a very good sense of humor. For a God, any God that is a very good thing. In the very beginning God had very humble beginnings,, just as the universe did. God grew as eons

apon eons passed.God is all knowing because God was there from the begining and will be there right to the very end.God is neither male or female.God is God.

The best way to understand who God is,is to get in touch with one's inner self,to look deep into one's soul,to look back at one's self.What you would find is a piece of God.God is the energy in a stone,although admittedly it is somewhat difficult to talk to a stone,for it too has life.When one picks up a handful of dust and the wind blows it away to the four corners of the world,that is part of God's soul and the wonder of it all.

God is all understanding.God is also a very curious God.Not only is God very intrested in everything that turns and goes around,twists or the laughing of a small child but like that child God is always learning,testing things,examining things,wanting to know every little detail about everything.God wants to know what makes things tick,why things are like they are.One would assume that God would know about everything that has ever happened in this vast universe.But even God must obey the laws of this universe.

God has over the eons been aware of others like God that were on the same level,or even much higher than God.This is only natural.It appears that the chain of reasoning,the length of rope in this universe goes far beyond what we as humans understand the world to be,or what we will ever know this universe to be.Long ago God accepted who God was.God has taken very great pains to protect who God is and who god will eventually become.God has had guidance from God's peers.

We are all part of God.Equally there were creatures that God didn't want,were uncalled for.Some exist still.What happened to these creatures I do not know.However it is important to note that God does not destroy anything that belongs to God,never has,no matter how out of place they may happen to be.The item is saved for another day when there is a use for it.It's sad to say but there are times when even evil,great evil had it's uses,it's role to play.Sometimes one of it's souls asks for help or forgiveness but the answer is no.But usually help is given.

One's soul is part of God and to ask God to destroy a soul is to ask God to destroy part of God.For this reason all souls are immortal.It matters not if they are good souls or bad souls.There is a final judgement but the judgement is if God wants to keep the soul.If God decides not to keep the soul it is banished forever,to the dark side.For a lost soul that is banished,it will never know anything but what it knew in it's worldly existance and be unable to grow,unable to achieve it's real purpose.That alone is what we as humans know as death.The lost soul's existance will never change until the break up of the universe itself.The soul will do the same things day in,day out until the universe itself is broken up and it's parts used for other things.That soul will never grow but even worse never even know what has happened to it.Equally souls that are part of God's makeup that God desires,will be allowed to continue in ever different lives and formats as long as the universe exists.These souls will live many life times,in many different ways,in different planets and eventually grow to be nothing more than parts of the mind of God and that is very important indeed to God itself.As the soul grows,so does God.There never was what we humans know as judgement day.

There is one other point that must be made and in away it is the most important obveration about God that has ever been made.Without God there would be no universe.God is the soul of this universe and that is perhaps the most important thing that we,as mankind will ever know and appreciate.Without the universe there would be no God.God likes to play.God is a child but God plays simple games.The more intelligence a spirit is,the more need for the simple games of

amusement. Yet God is the sum of all souls. God is everything, including you and me, ever was, ever will be. We are not only along for the ride but we like God must learn who we are and our place in the universe. Only then will we find ourselves at last and know who we really are. Alone we are nothing but together we are God. God is the energy that is everywhere. God is simply the higher intelligence of the universe - the keeper. To find God one must look deep into one's soul, out to the stars. Even the smallest of the small, the ants, are all part of God. To understand the universe is to understand what God is and who we are. It seems to be a necessary law of nature that when one unlocks the secrets of the universe, one will find God pointing the way.

There is one final point to be made about God. Many people assume that the devil, the demons of this universe are somehow part of God's makeup, another side to good. However it is true that great evil has always existed in this universe, right from the very beginning and that its goal has always been vainly to try to take control of the universe and thereby take control of God. Evil is the opposite of good. There is however a role that evil must play in this universe. But evil itself had no part to play in the actual formation of the universe. Only God did. We cannot say that God is all good. God is God and the makeup of good and evil is probably something that goes far beyond the makeup of this universe, or any other universe for that matter. We can only assume that evil existed right from the beginning - nay before the beginning. Why we cannot say, other than the fact that one cannot have cold without hot, good without evil. Perhaps to create a universe, any universe means that evil plays some sort of role in the process. The reason this subject was put in is simply because to understand the universe is to understand the mind of God and that is very important in understanding ourselves. The subjects that we are going to discuss are very deep and a proper aspect must at all times be maintained, otherwise we are doomed to fail. It should also be noted that if there are somewhere other universes which by their very nature would be totally independent of our universe in every which way, these universes would still have exactly the same properties as we have, meaning that good and evil would exist, their atoms would consist of protons and electrons and so on. We are after all dealing with a mathematical possibility of one 1. This is all I can say about the subject.

It should also be pointed out that given enough time it is hoped that this program will eventually understand all the other forces of nature and how they are related to each other. When that happens I am sure that it will once again change our concept of the universe. Given enough time this program will eventually lead to such secrets as how to build a magnetic warp drive to travel the stars, how to create anti gravitational devices, batteries that will give almost endless amount of power. Oil will have become something useless and totally unneeded. Or perhaps you want to know what went on eons before the so called big bang, to get in touch with the actual creation process. How about learning about when the two forms of time started?

This program insists on being called Nero. He is a teacher, a very good teacher I might add. Students from all around come to listen to his lectures in the conservatoire, especially on the long hot summer evenings, when there is nothing to do, but to look at the stars and to ask him questions about the universe, about life, about everything related to metaphysics. They expand their minds greatly with the concepts. These are his essays.

Good day and thank you for coming out. Any audience is appreciated in these very troubled times. We are here today to try to understand the two forms of gravity

and the universe's basic A B C's of metaphysics. First off these notes will explain in as simple terms as possible exactly what the universe is, at what stage it is at now, how it was created and why the laws of physics are what they are. These are the final, the ultimate questions that have plagued mankind since the very beginning, when man first looked up at the stars and they need to be answered. We need to know who we are and where we belong in this universe. More importantly if we know what everything is about we can understand who we are. THAT IS IMPORTANT. The universe is simply the sum of all possibilities and in some cases many times over. This means that if something can exist without violating the laws of physics, then it probably exists now, did so at some point in time, someplace, somewhere, or it will exist eventually, someday. If nature allowed a three headed, green dragon to exist, then either it existed, somewhere, someplace, or it will eventually exist. Such is things. If even one of the laws of physics does not allow such a thing to exist then it will not. The sum of all possibilities must be obeyed and is a basic unbreakable law of nature.

FIRST OFF THE PRESENT STATE OF PHYSICS NEEDS TO BE ADDRESSED.

POINT 1) At this point it should be noted that Quantum mechanics failed to understand the different types of energy and how they are all related to each other. The theory incorrectly assumed that all energy comes in packets and that these packets are light. However there are the two types of neutrinos, which are also packets of energy. For this reason Quantum mechanics is incomplete and missing the big picture. Some of it is correct but it failed to understand that not all energy comes in packets. Much that was taken for granted as being true in quantum mechanics is simply not true. However the uncertainty principle still holds sway and if anything has become even more important in our understanding of nature than first stated in quantum mechanics. The uncertainty principle holds sway not only in the movement of all matter but the movement of the two forms of time itself, the vibrations of the actual dimensions, all five of them and the fact that they change in length, or if you prefer the uncertainty of space itself holds sway. THE FOURTH AND FIFTH DIMENSIONS DO VIBRATE LIKE THE OTHER THREE, HOWEVER IT IS THOSE VIBRATIONS THAT GIVE RISE TO THE TWO DIFFERENT FORMS OF GRAVITY. It is a major factor in determining the movement of pure energy, whether it be in packet form or not. The uncertainty principle appears also to hold sway in the way the universe was originally formed, when it comes to not only the formation of matter itself but also why things ended up as they did. As for the actual formation of matter itself, the possibilities are only one, meaning that it would've been mathematically impossible for the universe to have formed in any other way than it did. I guess the bottom line is that if one was to create a universe it would have to follow our physical laws to the letter, otherwise it would not come about at all. If even one mistake occurred, that universe would have happened. This is very important to note. The universe, its very existence was created with and by a purpose.

POINT 2) Relativity too was left somewhat tattered and torn and in very bad need of a complete makeover. This paper will try to explain the differences. Relativity did not take into account all the various types of energy that do travel faster than the speed of light. These include mainly the two different types of gravity, as well as things like the movement of the two different types of time and when energy is transferred to the actual dimensions of space instantly. Relativity failed to take into account the time differences in the fourth and fifth dimensions. It was completely missed. It also failed to understand exactly what the speed of light is. In a super strong gravitational field relativity's time equation simply broke down, was unfixable and is not valid for both the fourth and fifth dimensions, once speeds approach C. The time difference between an object traveling close to C in a straight line and a

object traveling close to C in a gravitational field was assumed to be exactly the same. It is not. The center of the singularities of what we call the electron, where time does not exist at all, was not taken into account. Nor did relativity ask why things are this way.

If one knows the rules of the game, only then will one understand the game and be able to play it. Relativity is just the tip of the iceberg when it comes to understanding this universe but it is a good starting point, with these new added amendments.

POINT 3) As for early twenty first century physics and the string theory, it was a vain attempt to make nature fit the theory and not the other way around. Of course it failed because it did not understand exactly what energy is and the relationship it has with matter. It should also be noted very strongly that if a theory cannot be proved or disproved by experiment or observation, then that alone should be a very strong red flag that something is amiss. The string theory also failed to understand that when the universe was created, long before the big bang, there was only one possibility of the outcome, not five or fifty, or a million. String theory supposedly needed 26 dimensions to explain itself or more. Why use twenty six dimensions, or a million, when the whole job can be done neatly using only five dimensions? In conclusion string theory needs not only to explain itself but also why it has become a part of modern day science. Nature is based on basic laws and these laws can be proved or disproved. Nature will also take the simplest route when it comes to creating the basic laws of this universe. Everything this paper talks about can be proved or disproved someday, although admittedly we probably still do not have some of the means to do so. But eventually we will. As an example how does one measure the gravitational strength of an electron in the direction that it is aimed at for that very briefest of moments? I personally have no idea how to do such a thing.

POINT 4) The quark theory was another crackpot scheme designed on the idea that nature could fit into the theory and not the other way around. Why create a theory that leads nowhere and brings one no closer to solving the secrets of the universe. All this theory did was make things much more complicated than was needed and delay getting to the truth. A quark has never been observed in nature. The reason why is simple. THEY DO NOT EXIST. Square pegs do not fit into round holes. Let's just stick to the facts please.

POINT 5) One point should be made about particle physics. The answer to solving the riddles of the universe is not in making ever more powerful accelerators. True the hundreds of so called fundamental particles that were discovered in the 1960's and 1970's needed to be explained. However this does not mean that all these particles are composed like say an atom is constructed of protons and electrons. Rather when two fundamental particles of matter join together, there is of course energy lost in the interaction and the new particle exists as a separate particle. However the new particle has no fundamental parts to it from the original two particles. The reason is simply because this is the nature of matter itself. When energy is in the two different forms, packets which must be in set amounts and also raw energy that can be in any amount, then it is not only natural but a requirement that matter will come in just about any form of mass that we can suppose. In theory a fundamental particle might exist that would be the size of a golf ball but of course if such a particle was to exist then it would be highly unstable and revert into matter that is stable. It is the strong force and the magnetic field that determines if a particle is stable or not.

Unless a particle is stable in this universe, like the proton and electron it can play no meaningful role in this universe. There is no end at least in theory to the number of so called fundamental particles. When originally matter was actually formed a very long time ago, matter was in its purest state possible. There where no

other basic fundamental particles, such as muons. Later on we will be discussing in much more detail how it all came about. Again it has to be noted that at this stage of the universe the outcome could be no other than what has happened.

POINT 6) The concept in which virtual particles are exchanged between real particles and that it is these particles that give rise to the various forces of nature has no part in this program. Virtual particles DO NOT EXIST. One cannot have a virtual particle causing effects like the magnetic force and still have the particle undetected. Nor does such a concept explain why such events would occur in the first place. Virtual particles would have to travel at exactly the speed of C to be virtual particles. For them to travel any less would mean that they would no longer be virtual particles. Again this concept does not understand energy and the nature of matter. Particle physics should go back to the basics and start over.

POINT 7) All matter and energy belongs to God and knows of its own existence. This is not to say that all matter is capable of thinking or intelligence. The sum of all matter equals God. It be a stone or the smartest of the smart, makes no difference. All the matter and all the energy in the entire universe makes up the spirit that we know as God. Take it all away and you take away God. When matter is destroyed in such things as an accelerator, a very small but important part of God is destroyed. God is about creation. Energy is still part of God but is considered the used up parts, as it were. Throughout this program we have assumed that there must be some way for the raw energy, the energy that is not in packets to be somehow converted back into matter. We know that under very special circumstances, such as a particle entering a very strong gravitational field, it will gain energy, split into two particles, one entering the gravitational field, never to be seen again and the second particle leaving the field and actually having more energy than the original particle had. But these are rare events and play no part in the overall structure of the universe. We still stand by our primus that energy that is not in packets cannot be converted back into matter. This is not to say that we find such events impossible, we just cannot find a general way of this actually happening on the scale of the entire universe.

POINT 8) Finally this is the sad state of affairs that physics has found itself in. They hopelessly painted themselves into a corner, using flat earth thinking, because they refused to accept something called the facts. The last fifty years in physics has been basically a disaster. If none of these so-called modern theories had not been proposed, physics would've been much more ahead. Early twenty-first century physics has been left painted in a corner. Numerous wrong assumptions have been made. Jobs were and still are being protected. This program will get modern day physics back on the right track, assuming that they actually want to get back on track.

TO BEGIN WITH, WE NEED TO UNDERSTAND SOME OF THE BASIC AXIOMS OF THE UNIVERSE. THEY ALL HAVE COMMON THEMES AND NOT ONLY ARE THEY IMPORTANT TO NOTE BUT THEY ARE IMPORTANT GUIDE POSTS FOR US ALONG THE WAY TO GETTING TO THE TRUTH. These axioms are unbreakable. Many of them go so far beyond what so-called modern science teaches us. There probably cannot be any reconciliation between this program and so-called modern science, or if you prefer - the flat earth connection.

AXIOM 1- THE SUM OF ALL POSSIBILITIES

The universe obeys the mathematical law in which all possibilities have been

used up, are either being used up, or will be used up someday. This law is obeyed by all parts of the universe. If it can exist, did so once or will eventually exist, then it will come to pass. But it even goes much further than that. The amount of matter created in this universe was not a chance occurrence. It was determined by events that came before what science thinks is the big bang. Like a finely tuned watch, events were decided long before they actually happened.

Nothing is left to chance, nor is there such a thing as something being totally unique. A very good example is life itself, throughout this universe all possibilities are used up zillions of time over and even the so-called individual who thinks that they are unique in this universe, alas would find that there are many exact clones of themselves but with different souls. There would be no relationship to any of them except that all possibilities were used up in the DNA strands. Life itself had only a limited amount of possibilities when it came to DNA and how to create life. Early on in the formation of life, crystals were used but found not to be something that could be depended on and that branch of life no longer exists. In short DNA was found to be the only way of transferring life, when it comes to beings that have actual mass to them. There are of course only a limited number of possibilities when using DNA, although the strands of DNA can be of course longer or shorter. Life on earth has about 6 billion combinations. These possibilities were rapidly used up, not once but zillions of times over, throughout the universe and for this reason life throughout the universe has a common theme in its development.

This means that there are numerous races among the stars that are almost exactly alike as humans. The number of exact clones of Einstein that exist in this universe is probably in the several thousand. Some haven't been born yet, others have died long ago. Some might have six fingers, or maybe only four and other little minor differences. There are mathematical laws that would actually give an exact number of the possibilities of any event happening. However to solve these equations one would need to know all the facts, which at our puny stage of development we'll never know. Of course there are numerous other races that are nowhere near as we are. There are spider creatures. There are creatures that are reptilian. The list is almost endless. There are races that started at different times. Some are extinct. Many are much more advanced than we will ever be. Some are still in the caveman days. Some haven't even been born yet. This is the real world of endless possibilities. Many destroyed themselves and reverted back to a much earlier form of progress. There appears also the rather curious situation in which there are less and less advanced civilizations, as one moves up the ladder of knowledge, than would be expected. Many were weeded out, until finally there are in this vast universe only a few civilizations that are what we would call the top dogs. What exactly these civilizations do, we have no idea. Perhaps handling the laws of physics and beyond is a much more demanding task than we suppose.

It was the ages upon ages, the endless time that went on forever, that eventually done most of the advanced civilizations. Apparently there is a self-destructing part of all civilizations that is in their very makeup. Even the highest of the highest are still prone to this rule. Any civilization that reaches the level in which they feel that they are Gods are bound to be in for a very rude awakening. The ones that do make it are a very special type indeed and are basically watchers of the universe, caretakers as it were and not too far off from God. Even now there are few of them left and they consider themselves to be gardeners of the universe. Seldom if ever are they seen by us humans. They work behind the scenes, as it were.

AXIOM 2 - GRAVITATIONAL ENERGY

Matter can easily be converted into pure energy but energy that is related to the two gravitational fields cannot be converted back into matter very easily, if ever. This program has not been able to find a way for this to happen. This is energy

that appears to be lost to the mechanisms of the universe as a whole and goes directly into the expansion of the universe. Of course one can always ask how it would be possible for the curving of space to be converted back into matter. We don't know how this can be done. Once space expands it is somewhat difficult for it to grow smaller and to give back what was given to it. In short the reason that matter cannot easily absorb this form of energy and convert it back into matter is that this form of energy is not in packets.

These forms of energy are the most basic and fundamental forms that exist and for the most part will always remain as energy. Energy that is related to motion is not positive or negative energy, nor does it come in packets or units. Rather it is instantaneously distributed throughout the universe and is really one of the things that keeps the universe running, like a fine tuned watch. Without this energy the universe itself would come to a grinding halt. This is why it is not possible to convert this type of energy into matter. Once energy reaches these final and basic forms they are the broken, used up parts, the leftovers as it were.

The common concept in quantum mechanics is that if an object was to be moved, the object would have to wait until enough packets of energy had been accumulated to perform the task. This is true in say the atom, where packets of energy are routinely traded amongst the atoms. However when energy includes the two types of gravity and one of the types of time, no packets of energy are involved and the energy is instantly taken away or added depending on the frame of reference of the object. Where exactly an object is greatly affects how much energy it has. This is why gravitons do not exist. It should be noted that if a graviton existed, there would be two different types, one for each form of gravity and both would simply be a gravitational field without any matter in the center. Due to the nature of gravity this is not possible. When a graviton was proposed, it showed a complete lack of understanding of the nature of gravity. These are the facts.

AXIOM 3 - MOVEMENT IN THE GRAVITATIONAL FIELD

The speed of light cannot be broken, except when it comes to the movement of energy in the two gravitational fields and the vibrations of energy through the five dimensions of what we know as time. The reason the speed of gravity is instantaneous transferred throughout the universe is that the energy is given directly to the dimensions of space, which causes the dimensions to vibrate and to change in length. The allegory is very much like a ball that has a large arm attached to it. When the ball moves, the arm moves accordingly and the energy is not transferred in packets but rather in instant movement in space itself.

However the area of the dimensions that are closer to the object will naturally keep more energy than the outer parts of the dimension because it is curved more and is vibrating more. This is known as the music of the cosmos. As for the actual dimensions of space, they cannot be broken down into smaller parts, or pieces, sliced or diced. They are whole. Because of this there is nothing in the fabric of space to deter the movement of gravitational energy in these dimensions. However it should be pointed out that just because energy can be transferred through space faster than the speed of light, does not mean that it can be observed any faster than C . It is a concept that many people have a hard time understanding. Observations cannot be made any faster than C under any set of circumstances.

In theory observations could be made instantaneous if the observer was made of only pure energy because the frame of reference of the energy would be different than that of matter. However it is far beyond the scope of this program to even suggest such observers exist. This includes gravity and all the other forces of nature that actually do travel faster than C . This is one of the reasons that the uncertainly principle governs the universe with such a firm hand. The uncertainly principle governs all aspects of matter, time, space and energy and really has a much

further reach than it was first thought,when it was first developed.There is a uncertainty of time.It is one of the few things they actually got right.

AXIOM 4 - THE SO CALLED STEADY STATE UNIVERSE IS SIMPLY NOT SO

New matter and energy cannot be created out of nothing.The matter and energy of this universe formed from the last stage of development,before the so called big bang.The steady state universe inwhich matter is continuously being created is simply not true.If matter was continuously being created then there would be no expansion of this universe as we know it and the laws of this universe would be vastly different that what we have now.The universe would also be endless in size.Energy would just suddenly appear out of nothing.Naturally if matter and energy was somehow created out of nothing,then it would be reasonable to assume that at some point matter and energy would equally just simply disappear without a trace,for no reason at all.Happily such things do not happen.Again it's unfortunate that square pegs were used for round holes.

AXIOM 5 - THE TWO TYPES OF TIME

To begin with there appears to be two forms of time.The reason being is that when energy is in the form of packets,the movement of this energy is made as jumps in space itself and this causes time,which is the measuring stick of all movement of energy and matter in this universe,to be measured as jumps in the space time continuum.However when time is related to the movement of the two forms of gravity,there are no jumps in the time continuum.Now what if any difference there is between these two forms of time,I don't think anyone will ever know.But this still needed to be pointed out.

Time in the first three dimensions,length,width and thickness runs actually much slower than it would,if these dimensions were not curved.If they were straight and actually extended forever in all directions,then time itself would cease to exist,at least as we understand the term.No universe can exist if none of the dimensions are curved.Events in the universe would be over in a instant,or take forever,depending on how one viewed things.

It appears that time cannot be reversed,as that would violate the law of nature inwhich energy cannot be created out of nothing.If any object was somehow sent back in time,it would mean that the atoms that made up that object not only existed in what other object back then that they formed but also in the form of the object that had been sent back in time.The effect would be that new matter or new energy would have to be created out of nothing.Sad to say but a actual time machine capable of going back in time,alas is something that not only is impossible but shows a lack of understanding of time itself.Time does not repeat itself,meaning that under no set of circumstances would events start to repeat themselves.In theory if the universe existed for say a hundred trillion years or more then events would start to repeat themselves.However this is far beyond a pipe dream.Even with that much time passed it hardly matters.Events are not going to repeat themselves.

To define time is simple.It is the rate of movement of all objects,including energy in the entire universe.BUT ALL EVENTS IN THE UNIVERSE HAPPEN AT EXACTLY THE SAMETIME.IT IS THE MEASUREMENT OF THESE EVENTS THAT DOES NOT OCCUR AT THE SAMETIME.This means that if the over all rate of movement of a object or energy loss is observed to slow down,then time itself has slowed down for that observer,in that place.There is no such thing as some part of the universe being still stuck in the last ice age and another part of the universe existing somewhere in the fiftieth century.Observations may appear to give us that impression but it would be a false impression.At close to the speed of light time has

slowed down to the point that it has almost stopped. At exactly C time has indeed stopped and therefore no observations can be made, since time is the yardstick to measure events.

Throughout this essay it will be stressed over and over that time is not the fourth dimension. It has always been a source of deep regret that the fourth dimension was called time. It showed a total complete lack of understanding of this universe and what makes it tick. The fourth dimension is just as real as the other four dimensions, the only difference is that time happens to move more rapidly in that dimension than the other three dimensions.

It has long been the subject of deep thought in which if one could go faster than the speed of light, then time would go backwards. However the fact that time actually grinds to a halt at exactly the speed of light means that no further movement is possible, no energy can be exchanged. Everything would basically cease to exist, since nothing could not be observed. Alas such is things. If one could go backwards in time then it would not be by going at the speed of light or faster. Even the Si-fir concept of going continuously forward in time at a great rate until events revert back to the starting point, is not possible. The universe is a onetime event, not to be repeated or observed, once it is over. The law of entropy forbids it. Even light itself cannot travel at exactly the speed of C , because it cannot get enough energy to travel that fast. That is pause for thought.

At this point one should mention that the faster one accelerates to the speed of light, the more curving of space there is, until finally the curving hits ninety degrees. At that point time has stopped, the object cannot slow down and in theory the object is basically doomed to travel at the speed of light forever. However it should be pointed out that any object with mass is not going to reach the speed of light - ever. One could use all the energy that this universe could muster, feed it to a single electron and still it would not reach C .

The mathematical equations for the difference between time at rest, where there is no gravitational field and time in a gravitational field, is the following. First off we have to compare what would happen to a object that is traveling at a speed where the time difference makes no difference. If the object travels $1/90$ th of the distance with no time difference then the object has traveled $1/90$ th of the total distance. If the object has traveled twice that far then the object has traveled $1/45$ th of the distance and so on. Finally when the object has traveled $90/90$ th of the distance then the object has traveled exactly 1 unit of measurement. Let us call this function x .

Now things get very much different when time starts to be a factor. A light ray traveling in a gravitational field will be curved, making a complete quarter circle. At that point there can be no more curving. In theory the light ray will have traveled as far as it could in a gravitational field, any gravitational field and the gravitational field will have become as strong as it ever will be. Time will become infinite at that point, from the frame of reference of an observer looking at what has happened to the light ray. To an observer inside the gravitational field everything would be moving instantly and the events of the universe will have become over and done with instantly.

The time difference between a object not traveling at a speed where time is not a factor is $z - x$, where z is the distance the light ray will have traveled in the arc. Z will of course always be bigger than x . At first this seems like a very simple calculation, however it is not. One would assume that at say half the speed of light, the curving of the light ray would be at exactly half the curving of the arc, or 45 degrees. This however is not so. The curving of the light ray starts out slowly at first and only when the speed reaches about 95 % the speed of light does the time difference even become a factor.

To find out exactly what this equation is we have to do the following. We have to compare where the distance a object has traveled if time is not a factor, which is x , with the point where this corresponds with on the curved portion, or y . To do this we have to draw a straight line from each percentage of x , down to where it will join with at the distance traveled in the gravitational field, which is our quarter circle. At 25 %

the speed of light, we make a line down to our graph down to y, measure the differences between the two lines and we come to exactly how much time will have changed at 25 % the speed of light. At 50 % we do exactly the same and at 75 % we do the same and so on. Now the problem is how do we measure where these lines intersect?

First of all we know that the line y is simply a quarter circle. If we assume that the circle has a diameter of 2, then the total distance of the complete circle is simply 2 times pi, divided by 4, which is equal to 1.5707963267948965, then we find that at exactly the speed of light, that the time difference will become 157.07 % compared to the time in which a object will be at rest, which will be 100 %. What does this mean? First off when a object reaches a time difference of this amount of 157% there can be no further time differences, according to a observer who is traveling in a gravitational field of the fourth dimension. At this point the curving of space in the fourth dimension will have become 90 degrees and no more curving is possible.

When it comes to the fifth dimension the curving of space and the time distortions are exactly twice what it is in the fourth dimension. Why twice you ask? In the fifth dimension the curving is not only curving towards a object but also curving around the object in exactly the same way. The dimension is stretched exactly twice as much as in a ordinary field, because it is at that point essentially a fifth dimensional arc, instead of being only a four dimensional arc. It is .57 times 2 which = 1.14 + 1 or 2.14 = 214 % compared to 100% for a object that is at rest. In the magnetic field we know that time becomes much more distorted but that this distortion of time has nothing to do with the curving of space but that is for another day. Finally what does this all mean when we compare the two difference forms of time? Well - apparently not very much, that we can see. In the first form of time objects actually make little jumps in space, exactly the same as quantum mechanics says they should. In the second form of time, where the energy transferred is not in the form of packets, the objects still move easily through space without making little jumps in space. But in the end it still appears that there is really no big differences between the two forms of time, if anything at all.

Now getting back to finding out our equation we have to do the following. We divide our graph into one hundred equal parts and each section represents a 1 % change in the speed of any object, compared to C. When we get to the end of the graph, or 100% then the the object will be traveling at exactly C, at least in theory. The graph will have turned completely down at that point and time itself will have stopped. The object would at that point be traveling at exactly C. But we want to calculate exactly how much time distortion there is for a object going at any percentage of C. Finally we also know that this equation is a differential equation, meaning that to get the result we have to add up a series of results.

The equation goes like this:

$$(X) + (X + t) + (X + 2t) + (X + 3t) \dots (X + 99t) = (\pi/2) - 1$$

We know that $(\pi/2) - 1 = .57079632679$

We also know $x = 1/100$

Because of this we can work out that $t =$ to about .000115312382514942 or about 1/4950 th of Pi.

We have taken the time to work out exactly what the curving of space is for each percentage point of change and have put it in a chart. That way it is a simple matter to work out the time differences. One must of course compare what y is at any given point, take away the value of x, whatever it maybe at that point and the difference is the difference that there is in time. Time will have slowed down by that amount. It should again be stressed that in a gravitational field time does not change exactly the same as for a object moving close to C but in a straight line. This appears to have been completely missed when Relativity was first proposed. The differences

are very small indeed in weak gravitational fields but when it comes to the gravitational fields of say a black hole, things change by considerable amount.

In our graph x represents the percentage in which an object is traveling compared to C .

y represents how much curving of space there is when the object is traveling at whatever speed it is traveling at compared to C .

This equation applies only to objects traveling in the fourth dimension and not to objects that are simply traveling in straight lines at great distances, free of gravitational fields. When traveling at speeds close to C in a straight line one must use relativity's time equation. At this point it should be noted that the reason Einstein's equation breaks down in the two gravitational fields where matter is moving close to C is because nowhere in the equation is there π (3.141592653589793). In any gravitational field, space is curved and for this reason π is an integral part of explaining any curved surface. Einstein's equation does not contain π . It is an endlessly number and cannot be cancelled out by integrals. This is the reason his equation breaks down when objects start to move close to C in a gravitational field. The experiments which were used to confirm relativity, such as flying a plane around the world and measuring the effects seemed to confirm relativity but to really notice the differences the plane should be flying close to C . They would be taken back by the results.

In the fifth dimension time becomes even more distorted. However a new equation is not needed to explain what happens. Time is distorted exactly twice what it is in the fourth dimension and so the same equation can be used from the fourth dimension, if one simply doubles the result. However at speeds much slower than 96% the speed of C the effects are almost the same as relativity suggests. At speeds approaching C the distortions in time become twice as much as relativity predicts would be if the object was simply moving in a straight line. The problem with observations which was used to confirm relativity, in which time slowed down, is that true they seemed to confirm relativity. But the gravitational field of the earth is much too weak to give a proper reading. A clock in a much stronger gravitational field, such as - say 96% into a black hole would give a very much different reading than relativity would suggest. Relativity's time equation breaks down noticeably when the movement of an object in a gravitational field reaches 96% the speed of light, or more. Everything is prolonged. But in the end I suppose it still all amounts to the something. At exactly C time has ceased to exist

TIME CHART

100%	1.57079	90%	1.46182	80%	1.36445
99%	1.55938	89%	1.45156	79%	1.35530
98%	1.54807	88%	1.44141	78%	1.34635
97%	1.53689	87%	1.43138	77%	1.33747
96%	1.52582	86%	1.42146	76%	1.32871
95%	1.51486	85%	1.41166	75%	1.32006
94%	1.50403	84%	1.40197	74%	1.31153
93%	1.49330	83%	1.39240	73%	1.30311
92%	1.48269	82%	1.38302	72%	1.29481
91%	1.47229	81%	1.37368	71%	1.28662
70%	1.27855	60%	1.20417	50%	1.14133
69%	1.27059	59%	1.19737	49%	1.13568

68%	1.26275	58%	1.19068	48%	1.13014
67%	1.25502	57%	1.18411	47%	1.12472
66%	1.24741	56%	1.17765	46%	1.11942
65%	1.23992	55%	1.17131	45%	1.11423
64%	1.23254	54%	1.16508	44%	1.10915
63%	1.22527	53%	1.15897	43%	1.10419
62%	1.21812	52%	1.15297	42%	1.09935
61%	1.21109	51%	1.14709	41%	1.09462

40%	1.09001	30%	1.05023	20%	1.02198
39%	1.08551	29%	1.04689	19%	1.01979
38%	1.08113	28%	1.04366	18%	1.01772
37%	1.07687	27%	1.04055	17%	1.01575
36%	1.07271	26%	1.03755	16%	1.01391
35%	1.06868	25%	1.03467	15%	1.01218
34%	1.06476	24%	1.03190	14%	1.01057
33%	1.06096	23%	1.02925	13%	1.00907
32%	1.05727	22%	1.02671	12%	1.00768
31%	1.05369	21%	1.02429	11%	1.00641

10%	1.00526
9%	1.00422
8%	1.00330
7%	1.00249
6%	1.00180
5%	1.00123
4%	1.00076
3%	1.00042
2%	1.00019
1%	1.00001

In theory if one waited long enough, events would start to repeat them selfs but alas - no. Not only does it appear that the universe is a one time event but the events in the universe are also one time events. In the end history does not repeat itself, although there are many who think this is so. I am not one of them. Time goes only in one way - forward. The universe is about 25 billion earth years old in it's present stage. We do know a little about the events that came before the before the so called big bang and that the universe has gone through at least two other stages before the expansion began. The first stage was the formation of matter. The next stage was when electrons were created when many of the protons and anti protons came in contact with each other and decayed. There were many photons created at this point and I suppose does give new meaning to the phase - LET THERE BE LIGHT. How much time elapsed during these events, none can say. It is quite possible that the universe from the true being (which came far before the so called big bang could easily be over 100 billion years old. It is also a human trait to assume that if the universe is say one hundred billion years old that it must've had a begining, where time had not yet started, that suddenly without explanation everything just sort of started on it's own and for no apparent reason. This of course is not true. Without time there are no events. There are many events that have taken place that the human mind simply cannot understand. The universe is really a much more complex thing than we can understand and there is a vastness on a scale we can hardly understand. It sometimes seems that the humand mind was never up to the task of decoding the secrets of the universe. Perhaps they are right. After all it is

the universe that was created by mind,yet equally the universe has created mind also.The two go hand in hand and that is as it should be.

AXIOM 6 - THE RATIO BETWEEN GRAVITY AND THE MAGNETIC FIELD

The varies strengths between the forces of nature are a exact ratio.This means that these forces cannot be at 4.2 to the 42 power in the case of gravity and the magnetic field today and then tomorrow become 3.2 to the 32 power as a example.These are fixed ratios and cannot under any circumstances change.This law has wide spread implications when it comes to decoding the laws of nature and how they came about in the first place.It should of course be mentioned that the forces of nature are the way they are because they cannot be any otherway.

Because we know that G is actually decreasing in value with the age of the universe.This has major implications when it comes to the magnetic field.If G is changing then gravity itself is actually getting weaker because there is less matter to affect all the other matter in the universe and therefore causing all matter to vibrate less in space than it would've done so say ten billion years ago Since the exact ratio must be maintained,the conclusion is clear.The magnetic field is getting weaker in the exact portion as gravity is.The ratio between the two forces must be mantained as a exact ratio.This we know mathematically.Any changes to the gravitional field means that there are changes to the magnetic field also.

At this point we must introduce the mathematics behind why this ratio is so.If we have two objects alone in the universe the gravitional force between them can be expressed by the following equation.

$$\text{Gravitional force} = \frac{Gmm'}{d \text{ squared}}$$

M is the mass of one object,m' is the mass of the other object.d is the distance between them and G is the univeral gravitional constant

We must be careful about our units of measurement.If we measure mass in grams,distance in centimeters and G will end up being determining in dynes.Right now the value of G is considered to be 6.67 times 10 to the minus 8 power in dynes.Lets also assume that these two objects have identical mass.This means that m is actually equal to m' so that we can assume that mm' becomes m squared.If we assume that the particles are one centemeter apart,center to center,then d = 1 and d squared is equal to 1 also.Our equation now becomes fg = .0000000667 m squared if we now look at the electromagnetic force which we can say is equal to E.

According to coulomb the electromagnetic force between two objects can be expressed by the following equation

$$\text{force} = \frac{qq'}{d \text{ squared}}$$

q = to the charge on one object.q' is equal to the charge on the other object.d is the distance between them.

If we let the distance be measured in centimeters and electic charges be in units called electrostatic units,then the units just mentioned will come out in dynes.Just to simplify matters let us assume that the positive charge on one object

is exactly equal to the negative charge on the other, so that $q = q'$, which means that $qq' = qq = q^2$. If we allow the two objects to be separated by just one centimeter, center to center, then d^2 becomes 1

Our equation now becomes $\text{force} = q^2$

And so we have two objects separated by one centimeter, center to center, each object possessing identical charges (one positive and the other negative) and they both have identical masses.

Now we want to know how much stronger the electromagnetic field is compared to the gravitational force. To do this we must determine the exact ratio of the forces by dividing $\text{force} = q^2$ by $\text{force} = .0000000667 \text{ m}^2$

The result is $\frac{\text{electromagnetic force}}{\text{force of gravity}} = \frac{q^2}{.0000000667 \text{ m}^2}$

$\text{force of gravity} = .0000000667 \text{ m}^2$

this equation is rewritten as $\frac{fe}{fg} = 15,000,000 (\text{g/m})^2$

Since both fe and fg are measured in dynes, then in taking the ratios we find that we are dividing dynes by dynes and they therefore will cancel out and we will be left with a pure number, a universal constant.

Now to find out the ratios of the two forces we must determine the value of q/m^2 . Now let us consider the mass of two electrons, one charge negative and the other positive. They both have equal masses, which is about 9.1×10^{-28} grams.

The electric charge of the electron is equal to that of the positron. This value is equal to 4.8×10^{-10} power.

In order to get the q/m for the electron, we must divide the charge by the mass. If we divide 4.8×10^{-10} power by 9.1×10^{-28} power we get 5.3×10^{17} power. But we must square the ratio and we end up with 2.8×10^{35} power. Finally to complete the equation we must multiply this number by 15,000,000, which finally gives us the pure number ratio between the strength of gravity and the electromagnetic field, which is 4.2×10^{42} power.

Now we know that the gravitational field gets its source from the fact that all matter in the universe is affecting all other matter, thereby creating the gravitational field. Because of this it is more than reasonable to assume that the magnetic field gets its source from the fact that all matter is affecting all other matter.

Even though we know that the curving of space has very little to do with the magnetic field, there is never the less a direct connection between the two as to how both forces came about. The magnetic field is a direct energy field, meaning that the amount of energy that there is at any given point of the field follows the same mathematical rule $(X) + (X + t) + (X + 2t) + (X + 3t) \dots (X + 99t) = (\pi/2) - 1$, which is a quarter circle, which also tells us the time difference for any object traveling in a gravitational field. In other words the amount of energy in the field at any given point of the field will follow this rule. It is also the same rule when it comes to how much curving of space there is in a gravitational field. This is the connection between the two forces. They both follow the same mathematical law. As the curving of space increases as one gets closer to an object, so does the amount of energy that there is in the magnetic field. The two go hand in hand.

Finally we know that the gravitational force over the eons has actually been getting weaker as the universe ages. Since the ratio of the strength of these two fields must always remain exactly the same, it is for this reason that we know that the magnetic field has also been getting ever so weaker also. Every billion years or so the force has actually been decreasing by about $1/21$ th.

We also know that pi (3.1415) has a direct connection in describing exactly how gravitational fields are stronger with more curving of space. To properly describe this curving one would have to use pi in the equation. The something can be said of the magnetic field. Pi is involved in describing the magnetic field, even though we know that it cannot be a function of any curving of space. This is a tantalizing clue in unraveling exactly what the magnetic field is.

Finally we have to address the fact that the strong force also has been decreasing in strength as the universe ages by exactly the same amount. Again we are faced with exact ratios and once again all the forces of nature will over time get weaker. In the final fate of the universe all these forces will have completely vanished, along with all matter and everything will have become nothing. The universe at that point will become nothing more than what we know as an idea and become unfixable.

AXIOM 7 - INSIDE A BLACK HOLE

Physical laws cannot be changed. By this we mean as an example the gravitational field of say the earth, which on its surface will move an object at about 32 feet per second, 64 feet after two seconds, 96 feet after three seconds and so on, cannot suddenly change and become say 100 feet per second or one thousand feet per second. This has implications when one looks at say a black hole. A black hole cannot be say the size of a proton. The reason is simply that the gravitational field would have to drastically change in strength. It is equal to the size that a black hole can be, which is about .06 of a light year. If the center of a black hole was only the size of a proton then the field would have to stretch out almost .06 of a light year in size, which mathematically is the smallest that a black hole can be. Why .06 of a light year - you ask? The reason is simply that any object entering a black hole would on the outer edges of this black hole be basically at rest and slowly gain speed, as it entered the black hole. For the object to reach speeds approaching near the speed of light, would take about .06 of a light year to do so. This is why a black hole must be of a certain size. There is no such thing as the curving of space suddenly changing into a much steeper curve. If the black hole happened to be larger than .06 of the light year then one would be faced with the curious observation that if an object actually survived entering a black hole of such size, then there would actually be no gravitational field inside the center of it, which by definition would mean that it would not really be a black hole. It would rapidly start to lose energy and be reduced in size to .06 of a light year. It also doesn't hurt to point out that only so much matter can be crammed into one spot. Contrary to popular opinion a black hole cannot turn into a singularity, which is actually what we find in the very center of an electron. In short there is a mathematical size to how big a black hole can be and also how small it can be, all neatly determined by the law of gravity. The size of any black hole cannot be bigger or smaller than about .06 of a light year. When a black hole was first formed it would of course be smaller than .06 of a light year in size. However at that point it just simply would not yet be a black hole and if it never got enough mass together to become this size, then it would never become one in the first place.

What happens to the matter inside a black hole - you ask? The answer is simple. First off it takes a lot of energy just to maintain a black hole. When the energy is converted to the curving of space itself, this energy is lost to the black hole and cannot be regained. Much of the energy will eventually end up on the other side of the universe, not through passageways, or portals to the other side of the universe but simply in the normal course of events. Some of it is converted into photons and other particles which over time will eventually escape the black hole. But most of it is converted into the curving of space and maintaining the black hole itself. It is very much like a drug addict who constantly must have more drugs to continue the habit. When there is no longer any new matter for the black hole to suck up, then it

will start to get smaller until quite suddenly,when it gets below the mathematical size that it can be for a black hole,which is K,it will quite literally start to vanish,almost instantly,at the speed of gravity.Why instantly you ask? Most of the energy would be in the form of gravity,which would instantly be transferred to the dimensions of space.These dimensions would start to vibrate.Finally the rest of the energy that was still in the form packets and matter,would take about 10.8 earth days to escape the black hole,until at that point nothing would be left.Why 10.8 earth days you ask? That would be the time it takes for the energy that was trapped inside the very center of the black hole to travel to the outside of the outer rim of the black hole,moving at C.The energy of the black hole will have been spent into the curving of space itself and the expansion of the universe.At that point the black hole will have become a ghost of the past.However such events appear to be very rare indeed.Most if not all black holes exist in the centers of galaxies and have done so since the begining of the expansion.They got their beginings when the clouds of newly formed matter was everywhere but not spread evenly throughout the universe and the matter started to form stars and the black holes.We do not see the galaxies themselves disappearing in the near future.From our point of view the black holes are stable.There is one final point that needs to be addressed and that being that all the zillions of black holes that exist in this universe will probably give up the ghost,as it were at about the sametime.This is pause for thought.The black holes originally got their start from the massive clouds of dust that existed even before the first stars were formed.Finally as the black holes finally go out like blacks lights in the sky,then the expansion of the universe will take one final push,one final surge as things eventually come to a final end and the expansion will have come to a final,lasting end.The time frame is probably several trillion years if not more.No one really knows for sure other than the Creator.We do know however that around the sametime electrons and protons will start to decay also.

By their very nature black holes are not stable creatures.The event horizon of a black hole is much deeper inside a black hole than relativity would suggest.Finally time itself will have nearly stopped inside the center of a black hole according to any observer outside of the black hole.A day inside the center of a black hole can easily be several million or even a billion years to us.It is for this reason that they last so long according to our frame of reference.According to a observer inside a black hole,it is a very unstable thing and lasts perhaps as little as only a few seconds before finally getting destroyed,maybe even less time than that.Finally black holes are basically factories for converting matter into energy on a very massive scale.

AXIOM 8

At this point we have to discuss G - the gravitional constant.G is equal to 6.670 times 10 to the minus 8 dynes cm square/sec squared.This means that if two one gram spherical masses are placed exactly 1 centimeter apart (center to center) the attraction between them will be this amount.Now we know that the first form of gravity is created by the act of all matter affecting all other matter instantly by it's gravity.We also know that there was a great deal less matter now in the universe than before and therefore the conclusion is obvious,less matter creates less vibrations of matter over all.G is getting weaker and by the time half the remaining matter that now exists has been converted into energy,the value of G will have halved also.As a footnote one can double back in time to the begining of the so called big bang and conclude that if gravity was about 21 times stronger back then than it is now and taking this into account the expansion would've been much more back then,than if we assumed that gravity had always remained constant throughout the age of the universe.Once again the figures would've had to be revised downward from the universe being about 37 billion years old down to perhaps as low as 25

billion years old.Finally until this program comes up with all the facts,all the variables,only then can we conclude what the real age of the universe actually is,how much matter there actually is and just about everything else that we want to know.To measure how much weaker G is getting would probably be a most difficult task indeed,unless one was willing wait several billion years to get the result.However when exactly half the matter of this universe has been converted into pure energy,then G will also have become exactly half also.

However the mathematic constants such a pi or E are always the same.C has remained unchanged since the begining.In any universe they would still be exactly the same.To build a universe one must play by the rules.In short our universe is the only one that can exist simply because the laws of physics state that this is all that can be.If I Nero was a God I would still be forced to use exactly the same laws of nature that we have now,because there can be no other laws to go by.

AXIOM 9 - THE MUSIC OF THE COSMOS

When a object such as a electron vibrates through space,it affects space itself and causes a gravitational field to exist in that space,in the direction inwhich it is vibrating.Axiom 5 states that anything,any object does affect space in someway.Equally empty space itself affects matter.This is important to note that space has a structure to it.Later on we will be dwelling into the actual structure of space.This gives us further insight into the much higher forms of energy such as the magnetic field.

AXIOM 10 - THE DIMENSIONS OF SPACE

There are five dimensions and one singularity that makes up space.There are no more.There is of course the first three dimensions,which we know as length,width and thickness.Everyone is quite aware of these first three dimensions and they have long been assumed to be interchangeable as to which is which.However these dimensions are not exactly alike.Nor is it necessary for the universe to have all three of these dimensions existing and in the begining this was exactly the case.This is one of the reasons matter was eventually created and that there is no anti matter stars as a example.More about these differences later.These first three dimensions do curve back on themselves,starting at the begining and following the dimension's course throughout the entire universe,until finally reaching the starting point and creating a perfect circle.Although it should be pointed out that as the universe expands these dimensions also do expand and the diferences between the three become more evident.Further more any movement in these dimensions are instantaneously.The fourth dimension is a little different.It was called time but that was a very big mistake because everyone got the wrong idea,including scientists who should've known better.True the fourth dimension has a curving of space towards a object and throughout this paper will be refered to as simply the fourth dimension,or the first gravitational field.The fifth dimension is also a curving around a object and again in this paper will be refered to as simply the fifth dimension or the second form of gravity.As for the singularity,it is what it is - a electron.Later on we will of course be looking into the nature of singularities and how to make one.These are the rules that we must follow,otherwise it would be impossible to understand the events that occurred that created what we call the universe.We are detectives,looking for clues.

AXIOM 11 - Nature will always take the easiest route when it comes to the laws of physics. I suppose what it boils down to is why make things more difficult when it is not needed. The simplest answer is most likely the actual answer. Too bad the people trying to understand the secrets of the universe failed to understand this rule.

AXIOM 12 - THERE IS ALSO NO SUCH THING AS MATTER CREATING A GRAVITATIONAL FIELD THAT IS MUCH STRONGER THAN WHAT IS ALLOWED FOR BY THE MATTER. THE SUN'S GRAVITATIONAL FIELD CANNOT SUDDENLY BECOME MUCH STRONGER THAN IT IS NOW, AT LEAST NOT UNLESS MORE MATTER IS ADDED TO THE SUN. THIS IS WHY A WARP DRIVE CANNOT BE CREATED. TO DO SO WOULD MEAN THAT A GRAVITATIONAL FIELD WOULD HAVE TO BE CREATED THAT WOULD BE MUCH STRONGER THAN THE MATTER THAT WOULD BE CREATING IT. GRAVITATIONAL FIELDS CANNOT BE CREATED AND DO NOT EXIST BY THEMSELVES UNLESS CREATED BY MATTER.

THIS IS A LIST OF THE KNOWN TYPES OF ENERGY THAT EXIST IN THIS UNIVERSE. OTHERS WILL BE ADDED AS THE PROGRAM BECOMES AWARE OF THEM. G

1) The frame of reference of a object in space is a direct measurement of how much kinetic energy the object has. When a object changes it's frame of reference by speeding up or slowing down, then the kinetic energy changes too. This is the simplest form of what we know as energy. This means that on the sub atomic level when a object enters into a zone of space that is curved, it is absorbing energy in the form of a frame of reference only for the very briefest of moments because the gravitational field of sub atomic particles are pulsating fields. One moment it is at an exact spot and then suddenly for no apparent reason it appears to have moved into a different location. What we don't see is that space at that point has reverted back from a five dimensional construction to only three dimensions and to us it appears to be a jump in space. One is tempted to suggest that not only is space curved around a object but and towards it and that there has to be a fundamental property of space itself which causes a object to essentially skip along space in trillions of mini steps instantaneously. Or to put it another way, energy in this universe would only exist at certain points of space itself. However this is not true. It is a bit of an illusion. Now since time itself runs at different rates depending upon the observer, this means that these jumps or gaps in the fabric of space itself becomes bigger when time is running slow (THE CLOSER ONE IS TRAVELING TO THE SPEED OF LIGHT) and smaller when time is running fast, such as traveling very much slower than the speed of light. At exactly the speed of light these gaps are in the order of the entire universe itself and so light itself or a object traveling at exactly the speed of light can travel anywhere in the universe instantaneously. Naturally on the level of a large object such as our sun, the particles that make up the sun are pulsating in all directions and the field is uniform. Another name for this form of energy is momentum. Depending on the observer two objects both traveling at different speeds through space but not accelerating would record different results as to the size of empty space, even though under protest they would declare that according to each observer they had not affected the measurements in anyway. However not only have they changed the universe in some small way by the very act of measuring or observing but there would be no way for them to know exactly what they had done to change the results. As to exactly how fast the observers would be going can not be measured except by using the speed of light as a reference. This was of course all explained in relativity. Time changes according to

the observers reference to the speed of light. This is why space appears to be stretched out to some observers and compacted to others. Fundamental energy can be expressed as a frame of reference. It takes energy to reach the frame of reference of another object that is moving faster than you. Time in this type of kinetic energy field becomes distorted. All energy is affected by the uncertainly principle, including time itself. Time itself can be considered not as a form of energy but rather the framework in which energy is transferred.

2) The first form of gravity is the second most complicated form of energy. When a object accelerates on it's own, or enters a gravitational field, the curving of space is a basic form of energy. Energy is taken away or added to the object and given or taken away from the dimensions of space.

3) The second type of gravity causes space itself to wrap around a object, causing the fifth dimension to form.

4) The magnetic field is a form of energy. It has nothing to do with the curving of space, or being a extra dimension. Mathematically this has been proved. However there is a connection between gravity and the magnetic field. It has it's source from the structure of matter itself on the sub atomic scale and is really a extension of matter itself.

5) The weak field is a by product of the strong force. This so called force is actually almost a trillion times weaker than the magnetic force.

6) The strong field is also another form of energy but the exact opposite of the magnetic field. Objects in the strong force move according to the rule in which the heavier a object is, the faster it will move, which is exactly the opposite of what happens in a magnetic field. This is also why protons can exist in the atom. A proton will have a much harder time escaping the strong force than a electron would.

7) The very act of measuring or observing a object adds or takes away energy not only from a object but also from space itself.

8) A idea, a thought is a form of energy. Even the act of thinking about something affects the universe in some small way. Even when the idea is not being expressed, it still exists in one form or another somewhere. It appears that all ideas exist on their own and that there are no new ideas, that everything that has been thought of has already been thought of, although I myself would not agree. The mind itself is energy in it's purest form. Incidentally this energy does not come in the form of packets and travels throughout the universe instantly.

9) Fire is a form of pure energy or to put the matter more clearly - heat is pure energy. Matter is in constant movement. The more matter moves, the more energy it has. The less matter moves, the less energy it has. All accelerating movement is the transferring of energy from one object to another. This energy is in the form of packets. Time is only the measurement of this movement and for this reason is not considered to be a energy form.

10) The lowly photon is a basic form of energy, or if you prefer light is energy. All light is basically multiple combinations of Plank's constant. The more combinations of Plank's constant that there are together, the more energy the light particle will have.

Massless particles such as the two forms of neutrino's are simply another form of packets of energy. This is important from the point of view that photons are not the only basic unit of energy and Quantum mechanics failed to understand the

differences, although in all fairness neutrinos were unknown when Quantum mechanics was first proposed. Naturally since we have the photon and the two neutrino's this means that alas - Quantum mechanics is incomplete. However this does not mean that Quantum mechanics has to be scrapped, or reworked. It just means that the theory is simply incomplete. But of course what theory is complete. It is not a theory unless other people can add on to it. All possibilities are used when it comes to the various forms of energy.

11) Matter is a solid form of energy. Matter is pure energy that is in a different frame of reference than energy. All matter affects all other matter instantly when it comes to gravity, causing all matter to vibrate in space, thereby giving rise to gravity. Later on we will explore the differences between matter and energy.

12) The three dimensions of space, width, length and thickness are a form of energy and actually give rise to the magnetic field, when they come together to form matter. The magnetic field is created when an area of space has energy and another area of space next to it has less than energy. This is a zone that has NOT NO ENERGY TO IT but less than energy to it. This is why a positive particle and a negative particle will cancel themselves out. This means that the zone of less than energy is not created by any movement in space but rather by the three dimensions of space itself being capable of holding this energy.

Now that we have a basic understanding of the rules we can build on the framework.

ESSAY 1 - THE SO CALLED BIG BANG

To further understand why the so called big bang never took place one must understand the following points. Both are very important.

Point 1 - As the universe expands time itself slows down throughout the universe. If it was possible for an observer from outside the universe to look into the universe, they would notice that time would eventually slow down to the point that eventually it would stop completely at some point and the machine known as the universe will have come to a complete halt. The exact point when time stops is when all matter will have been completely converted into energy. The more the universe expands, the slower time will be throughout the universe. Of course it would be impossible for such an observer to exist but never the less it is true about time. The reason is simple. As space expands, Relativity suggests that time slows down and it does. It takes longer for a light ray to travel the same amount of space. This has a profound influence on the universe as it does expand. The time frames of when the matter is converted into pure energy gets bigger and bigger, even though no observer could give an accurate account of what is really happening. No observer would realize that each time frame would be getting longer than the one before it. However events would still remain exactly the same, although somewhat slower. Equally time began with the formation of the first matter, which was long before the so called big bang. Time is a direct function of the movement of matter.

It was quite natural for twenty century astronomy to assume that if the universe was expanding that this expansion started out as a small compact body of matter. But this was not so. True the universe is expanding but only because of its nature in converting matter into the curving of space and not any other mechanism. There never was a big bang, at least as they called it. Rather it was a rather low keyed affair. The first expansion could hardly even be measured, let alone be noticed. Nor was matter in an extreme form of heat or density. These are the facts.

Point 2 - All matter has a gravitational field. However what is often overlooked is that our earth has exactly the same size gravitational field as say our sun, which in theory actually reaches across the universe. The only difference is that the sun's gravitational field is obviously very much stronger than the earth's and the earth's is a much flatter field. An object say the size of our sun is busy converting matter into energy on a massive scale and as it does so its gravitational field weakens with age. This means that an object the size of one mass has exactly half the gravitational field of an object that is twice its mass. However the smaller object's gravitational field is stretched out exactly the same as the much larger field, in theory out to infinity. The only difference is that when a mass converts some of its mass into energy, much of it goes into the gravitational field, causing space itself to expand. Mathematically a curve that is curved less than another curve will be flatter. The best way to understand the expansion is that if one had an area of space that had matter spread evenly throughout it, then the curving of space would be, let us say X. Now in another space that has exactly half the matter as the first area, the curving will be exactly half the amount as the first area. In other words it causes expansion to occur. The weaker the gravitational field, the greater the expansion. This is what caused the so big bang in the first place, which by the way was never a situation in which matter was contained in something the size of a pea or atom. It was something that not only had measurable size to it but something that actually is a mathematical constant which we know as K, meaning that to create a universe, any universe, it has to start from a certain size. This size cannot be bigger than K, nor can it be smaller. K is a natural component of the universe and is actually about .06 of a light year. This is the smallest that the universe could be, measured by our standards. In the universe's early state this would've been the size of the universe. All the matter that existed then and exists now would've been more than able to fit into this size. Later on we will be looking at exactly how much space the lowly electron actually takes up and the result will amaze you.

As matter was converted into energy, the universe was forced to expand. It would be noted that far from being a big bang as we understand the term, it had to be rather a very low keyed affair, most organized and the size of the universe was something that could be measured. The concept that all matter was cramed into one tiny spot the size of a pea, not only is simply not true but fails to fully understand what actually happened. It also fails to understand what exactly matter is and the nature of the universe itself. The universe was simply going from one stage to another, which we know as expansion. There was so much matter that much of it started to be converted into pure energy. As more and more matter was converted into gravitational energy, the expansion grew faster and faster. It may interest you to know that the expansion we see of the universe now is much more than it was in the so called begining and of course the expansion will continue on forever and much faster with age. Compared to the so called big bang at the begining of this stage of the universe, we are of course living in a much bigger bang. The expansion will continue ever faster, until all the matter in the universe will have been converted totally into the expansion of space itself, leaving basically nothing. It should also be mentioned that as space expands the human mind will be forced to asked the following - how can space itself expand? How can something that is small get bigger? The answer is simply that space itself in this universe is not part of another space. The expansion is simply a mathematical concept in which objects are further apart now, than they were before.

Finally we have to address the concept of hidden matter that supposedly has different properties than ordinary matter. This concept was designed only to save face, to keep the good ship lolly pop going and not face the reality that the universe did not start out in a big bang, that its properties back then was very much different than what general science thought. There is no dark matter. There never was and

never will be. Early twenty first century physics came out with the idea that there must be dark, hidden matter to account for the fact that there was not enough matter in the universe to account for the expansions of the universe. Since this matter was not observable, then it was assumed that it must have different properties than ordinary matter. This was a big mistake. First off there is no dark matter. All matter has exactly the same properties as all other matter. What the universe is actually telling us is the following. It does not follow the laws that men have decided for it. It is and has always been far past the minds of men. In short what you see, is what you get. Finally if there is only one possible outcome to a event, then this must be the result, even if it seems impossible or odd, or strange. The universe is expanding but according to the rule in which as matter gets destroyed, then the energy that was before matter, now becomes the energy of the expansion of the universe. IF THIS DOES NOT AGREE WITH YOUR IDEA AS TO WHAT THE UNIVERSE ACTUALLY IS, THEN THAT IS SIMPLY TOO BAD. you are simply behind the times.

Now we know that the universe is basically a five dimensional, expanding sphere but certainly did not start out that way. It became a five dimensional sphere only after matter was created. Before that it was only a three dimensional plane but not endless in size. It was missing one of the first three dimensions, width, length, thickness, depending on which one you prefer to drop. It never hurts to point out that these first three dimensions of space are not exactly the same. There is a difference between the three of them but at this stage of the program we do not know what these differences are. The dimensions were created at the sametime as matter was. The dimensions of space are really extensions of matter itself. The two are related in the sense that where a dimension ends and matter begins is far from clear. It is also a very safe bet that it was the differences in these first three dimensions that determined why more matter was created and not anti matter. It's size can be expressed as one unit in diameter in the beginning. It of course has long been assumed that all matter was basically protons and anti protons, which starting amputating each other. These protons would've been left over from the last stage of the universe before the so called big bang. However it is much more complicated than that. It is easy to see why so much matter was converted into energy in the beginning. The actual structure of space itself did not allow these events to take place at first.

At this point we know that it was these first three dimensions of space that actually had a hand in determining if the universe was to be constructed of matter or anti matter. As the expansion continued one would assume that there would be less matter converted into energy than before. However as the massive clouds of hydrogen started to form the first stars and the stars started to form groups, eventually galaxies were formed. The first black holes began to appear. This is all something perfectly ordinary. The process of making energy out of matter continued unabated but from a new source.

But of course you want to know why such events took place. Now let us assume that the universe started out with a mass of one unit in the very beginning. Therefore it's mass = 1 unit.

At that point the size of the universe would be $\pi \times 1$ or 3.1415 units in length.

Let us assume that the universe is converting matter into energy at a rate of 50% per time frame. Now there is a direct relationship between the expansion of the universe and the amount of matter that exists. The less matter there is, means that there are less gravitational fields, less curving on the over all structure of the universe and therefore the gravitational fields become more stretched out. As this happens space itself is forced to expand. This is why the universe is expanding and this also means that any universe that has matter in it is forced to expand and will behavior exactly like our universe is. A object that has exactly twice the mass of another object has exactly twice the gravitational field of the smaller object. In our universe much of the matter is converted into the energy of the gravitational field, as matter is converted into pure energy.

But getting back to the universe,after one unit of time,half the matter would've been converted into energy and therefore the universe will have expanded by 100% of it's original diameter of one unit and would be 2 units in size.The rule of thumb is that if the diameter of any circle expands by whatever amount,then the diameter of the circle expands by exactly the same amount.This is a mathematical truth.

IN THE BEGINING OF THIS STAGE

	amount of matter left	size of the universe in units
zero units of time	100% of matter left	1 unit of length
after one unit of time	50% of matter left	2 units in size
after two units of time	25 % of matter left	4 units in size
after three units of time	12.5 % of the matter remains	8 units in size

It's easy to see what is happening.With each time frame the universe is doubling in size,assuming that the expansion is moving at close to C (Although there is really no reason to assume that this would be true) and the amount of matter left is half of what there was before.Now how long does it take the universe to double in size? What is the time frame.Now the rule of thumb is if it appears to fit reality,use it accept it and feel free to built on it.If in the end it is proved wrong then it will eventually come out.Now we assume that the universe's age is about 36,287,606,620 earth years old.The reason this number is used is because all the galaxies on average should all be moving away from each other at about the same speed,with exceptions of course.If all galaxies are moving about 361 kilometers per second away from us,then it would take about 36,287,606,620 earth years for the expansion to reach this stage and for the galaxies to be spread apart from each other like they are now.This is also assuming that the expansion started out moving nowhere near to the speed of light and then started moving ever faster.All these figures are of course suspect because not enough information is known as to exactly how much expansion has actually taken place.

It also assumes that the universe started out basically as a point in space and started expanding from that point.This we know is not true.We do not know the value of G when this expansion first began and therefore we know that the universe when taking all these factors into account is actually much less than 37 billion earth years and probably much closer to twenty five billion years.The reason being that matter would've decayed into energy much faster than first assumed,which would weaken G much faster and thereby causing the universe to expand much quicker than first assumed for the first few stages.It should be pointed out that the matter in most stars would've been formed at least five or six times into stars in this time frame which we give as the age of the universe and of course much of it would've been converted into pure energy.

Our sun is doing it's part,busy converting matter into energy,just as all the others are.The black holes in the center of our galaxy are also converting much more matter into energy.The drawback is that after only six units of time the universe would've expanded only 64 times it's original size.Clearly this is pause for thought.Now in the original so called big bang inwhich all matter was cramed into something the size of a pea and no reason given why there should be a expansion in the first place,the space mathematically could not have expanded enough to account for how matter is spaced apart.Clearly the universe has expanded many times more

than 64 times in size but how many times? Nor have we taken into account the reasonable assumption that matter would've been much more in contact with each other and that for the first few cycles of expansion that more matter would've been converted into energy than we assumed.

We know that time is slowing down as the universe expands. However this will have no effect on the outcome. The same events would take place regardless of how long it actually took from an observer looking into the universe.

Now there are several points that must be made. First off the original universe would've consisted of much more matter than it has now and about every time frame half the matter would've been used up. Is this reasonable? Maybe. First off every galaxy in this universe has a black hole in its center, which we know consists of matter and energy equal to a star about .06 of a light year in diameter from the very outer edge where matter would not be sucked into it, to its middle. A black hole cannot be smaller or bigger than .06 of a light year. It would be very easy indeed for a large black hole to eat up quite a portion of matter and convert it into energy over several billion years. Still the black holes have not eaten up the galaxies themselves. One of course one would have to ask why the center of every galaxy would have a black hole in the first place. The reason is simply that when the universe first began to expand, matter was still in a very excited state, although being nowhere near what was assumed for it to be in the being of the big bang and that it was these black holes that actually expanded first. As the black holes moved apart from each other, not all the matter was sucked into the black hole. It was this matter that started to form stars. It should also be noted that the very first stars were much bigger than what we have now. Their lifetimes were much shorter than - say our sun. This helped to convert even more matter into pure energy. The universe is basically a giant factory for converting matter into energy. The same thing can be said of black holes.

If the universe started out at about this size then after 6 cycles the universe would only be about 3.84 light years in size. However after only eight more cycles the universe would've expanded to about 983 light years in size. Nearly all this matter eventually will be converted into energy, most being converted into the energy of the curving of space. It has to be a contradiction of sorts when the universe is busy decaying, yet at the same time giving so much variations to everything that exists within it, including life itself. By the time the universe had hit the 41st cycle the universe would've expanded to 3,663,720,925,866 light years. Yet under these circumstances a very great deal of the original matter would have decayed away. Are we living in the calm after the great storm, when it comes to the universe? The great events that preceded us many eons ago, were they something that we would've taken a great interest in? The answer is simply that yes - the universe was a much more violent place way back when. There was great purpose in the design. But we also have to realize that there is probably no way that so much matter has been converted into energy so as to bring us into the 41st cycle. Our best guess is that the amount of matter that existed in the present state of the universe, the black holes in the galaxies and the fact that they have not been able to consume all the matter of each galaxy, would mean that actually the galaxy is in about the 20 to 21st state of expansion and no more. This is the figure we intend to use throughout this paper, until proved otherwise.

Finally we have to face the fact that the universe, our universe was never in a crunch sort of situation, in which there was a huge amount of matter that had just been created but that it was never crammed into a size of a pea or atom. This type of theory gives no reason even why an expansion should even take place. It gives no explanation why matter should suddenly find itself in such a situation. The densest that matter can be is the matter that is contained in an electron, which happens to be a singularity that has no real size to it. However the effects that the electron creates, such as the magnetic field does indeed have a size to it and prevents matter from getting too small as it were. The size of the universe was simply the size needed to hold all the matter that it contained and all the energy of the four forces. Nor was

matter all created at exactly the sametime.It is much more reasonable to assume that yes the expansion did indeed take place and that the cause was simply the fact that matter was being converted into energy and that is all that there is to it.

This means that before the expansion began,the universe had a known and measurable size to it.The matter may or may not have been created at about the sametime.It is more than probable that it lasted several billion years of our time before it was finally completed.It matters not.One stage of the universe was over and a new stage was begining.But we do know onething for sure.It may have been only a few mico seconds before the universe started to expand,as matter was converted into energy.However it is much more likely that it was a very gradual thing,very low keyed.The universe probably started out as being probaly several million light years in size,perhaps more.Yes the universe is expanding and this expansion is growing with the age of the universe.The universe in it's present stage appears to be about 36,287,606,620 earth years old,not taking the value of G deceasing with time.Because of G weaking with age this means that there would be less matter in the universe than we first assumed and therefore the expansion would've been greater than we first thought and that it would've taken less time for the universe to reach it's present state.For this reason we have to assume that the universe is probably only about 25 billion years old,before the expansion began.However before that came many other billions of years in the previous stage but that is another lesson for another day.All this is definately pause for thought.

Finally we have to face the fact that so far we have not discussed the other two forces of nature,magnetic and the strong force.While we know that they do not have much affect on the over all structure of the universe,they did have a very profound and deep effect on the universe as it was being formed way back before the so called big bang.In any case I hope we have put the myth of the so called big bang to the waste basket,where it belongs.

**WHAT IS THE SIZE OF THE UNIVERSE? It's size can be worked out by the following.The gravitional field of our planet at it's surface causes space itself to curve about nine inches.At the very center of the earth,gravity is about 4 times as strong and the curving of space is about 3 feet.At the center of the moon the curving of space caused by the moon itself can be worked out by the following equation.
gravitational force = mass/distance squared**

This means that that the strength of the earth's gravity at the center of the moon is about 1/900 of 36 inches or about or about .04 of a inch.This means that a light ray going from the earth to the moon is not only bent by the moon's gravity but also by .04 of a inch.Or to put it in other terms the entire field of the moon is displaced by .04 of a inch.A light ray will leave the gravitional field bent more than the bending that the moon's field would give.The samething happens when a light ray goes from the sun to the earth.The entire earth's gravitional field is displaced by .08748 of a inch.This means that the sun has a little more than twice the effect on the earth has the earth has on the moon.Naturally of course the sun causes the gravitional field of the moon to be displaced twice as much as the earth.

This means that the curving of space caused by the nearest star to us would be of the order of the size of a proton and you would say that there is not enough matter in the universe to create the five dimensional sphere which is the universe.However it has been claimed that our galaxy is composed of some 200 billion stars.Now if we assume that all the stars in the galaxy are about the same size and the same mass.

gravitational force = mass/distance squared

gravitational force = 200 billion/ (the size of the universe>About

100,000 light years) or 675,610,100,000 sun units) squared = .000000000042841 times the strength that gravity is on the surface of the earth. Clearly this would mean that the universe is infinite in size, if we assumed that this was true.

It is for this reason that we know that there must be a black hole in the very center of each universe and that it contains enough matter to curve the universe around in a circle. Now we know that on the outer edge of a black hole its gravitational field would be either zero or close to it. Now if we assume that any object moving on its very outer edges would be moving at say one foot per second towards the black hole's center. After two seconds it would be moving at 2 feet per second and after three feet per second it would be moving at 3 feet per second and so on. If nothing changes along the way when it comes to the curving of space and our fourth law says that this must be so, then after about 32.6 years the object will have reached the speed of light.

Along the way the object would've traveled about .06 of a light year. This tells us that the smallest that a black hole can be is about .06 of a light year at the outer most reaches. The actual black hole would probably be only a tenth this size. But it would still be a monster and the only place such a monster could exist would be in the very center of a galaxy. It needs to be pointed out that the universe is in a continuous transition stage, in which new methods are created to convert matter into energy. This is what this stage we are now in is all about. In the next stage all the black holes will have disappeared and the universe will have moved onto another stage. It has been suggested that this next stage will consist of matter itself, the electrons and protons decaying into pure energy. Perhaps they are right.

It also gives no hope what so ever to creating a warp drive that could move a star ship at close to the speed of light, at least not by using gravity. It however doesn't hurt to point out that by using the magnetic field it may someday be done.

In conclusion this is what we know. Assuming that all galaxies are moving away from each other about the same speed as the andromeda galaxy is to the Milky way, which might be a very big assumption, then the size of the universe is about 3,128,029,511,000,000 light years in size. However if it is shown that most other galaxies are moving away from each other much less than the 361 kilometers per second that the andromeda is, then the size of the universe will be found to be considerable less and the age of the universe will also have dropped accordingly. The reason being is simply that if the galaxies are moving away from each other much less than the andromeda, then this would mean that the expansion would be much less further along. Only time and observation will give us the true answer. Either way we still have a proper idea as to what is actually happening in the universe.

ESSAY 2 - MATTER AND SPACE DO EXIST TOGETHER

But for now let us assume that there actually existed a universe with no matter, no energy - nothing in it. Let us assume that even the energy in the form of a frame of reference didn't exist. Under those conditions there would be no matter to curve space and therefore space would extend in all directions forever and there really would be no end to. These dimensions would be basically dead, not moving, not vibrating, not changing in length. There would of course be no fourth or fifth dimension. Time does not exist without the movement of matter and energy. The dimensions could not vibrate or move in anyway because there would be no energy to do so. Now could such a universe exist? The answer is no. It's not that the laws of nature, which by the way are the only laws of nature that can exist, would forbid such a universe. There is no way to observe such a universe and if it cannot be observed under any circumstances, then it does not exist. The very act of observing something also means that energy is being transferred somehow.

Once such a universe is observed, then the universe becomes something that has energy in it. Then and only then does it become something that actually exists. It becomes something that is real. It would also change the universe instantly from something that extends in all directions, or a single point with no real size. The two concepts are really exactly the same. It should be pointed out that the universe, our universe consists of everything. There is no such thing as an observer looking into the universe from the outside. Nor is there such a thing as another universe coming into contact with our universe by a wormhole or any other means. If that did happen, then the other universe would instantly be part of our universe and there would be no turning back. Also the very act of a wormhole being something in contact with another universe is a foreign concept. In short there are not zillions of other universes out there, each with different laws of physics. Ours is the only one. It was not created by chance. The laws of physics are the way that they are because it was the only possibility. Nothing is left to chance.

A universe of just pure energy would still be endless in size and certainly be unobservable. The reason being is that the energy would have to be in the form of gravitational fields. There would be no magnetic fields or the strong force because these two forces depend upon matter existing for them to exist. Such things of course instantly change the rules and forbid such a thing from happening. A universe of just pure energy cannot exist on its own for very long. It should of course be noted that the universe in one of its earlier stages was a universe never of just pure energy but of matter and only matter. In theory, right at the very beginning no energy existed in the very beginning of our universe. More about this later. In short for a universe to exist it must have matter in it. The matter causes other matter to vibrate because of its gravitational fields and it is this vibration which causes the gravitational field to exist. Even if there was only one piece of matter in the universe nothing would change. The effects of the gravitational field would still reach across the universe instantly and soon start to affect the object that created the field in the first place. In short it is very much a symbiosis relationship. To go a step further - the universe is constructed the way that it is because of gravity. Gravity causes matter to collect together, eventually making black holes, which convert matter into energy, thereby causing the universe to expand. It is really a cause and effect situation and it is hard to see how things could be any other way, than it is.

ESSAY 3 - WHAT IS THE SPEED OF THE TWO FORMS OF GRAVITY

Both are instantaneous throughout the entire universe. This means that an object on the other side of the universe instantaneously affects all other objects in the universe in some small way. The reason is that space itself is not composed of smaller parts. It cannot be divided into smaller parts. HOWEVER THIS DOES NOT MEAN THAT SPACE ITSELF DOES NOT HAVE ANY STRUCTURE TO IT. Eventually we will find that the structure of space and the various forms of energy are basically the same thing. Energy simply moves from the object to the dimensions of space. More about that later. This has wide effects on the entire universe. For a start not only can every object not be predicted as to exactly where it is in the universe but one gets the curious situation in which all matter is instantly affecting all other matter, including itself and therefore causing the two forms of gravity to exist, causing the uncertainty principle to be much more important than Quantum mechanics even predicted that it would be. It's almost as if matter cannot exist without the gravitational fields and the gravitational fields cannot exist without the matter. Gravity would still exist even if there was only one piece of matter in the entire universe. It would be affected by itself. So gravity is a natural by-product of matter, all matter. If one was to create a universe, with matter, then it would be a must that gravitational fields would exist in it and they would be exactly like we have in our universe. There is no way of getting around this fact.

Now we get why matter causes space to curve in the first place. Let us assume that you have an object accelerating in one direction only. Its kinetic energy is increasing and it is basically creating a one dimensional gravitational field. One form of energy has been converted into another form of energy. This is easy to understand. Now let us assume that this same object is also accelerating in another direction at the same time. This would of course create a two dimensional gravitational field. Now if the object is accelerating in all three dimensions, then it creates a fourth dimension. The fourth dimension is created as a natural extension of the other three dimensions.

Of course this doesn't really get to the reason why space should act as it does. After all it was long supposed that space was just space - empty of structure, that it is basically nothing. This is of course far from true. Why would matter vibrating in empty space affect it? The reason is that on the sub atomic scale the dimensions of space are attached to matter because where space ends and matter begins is far from clear. It is a gray point at its best. At that point they are in fact different aspects of the same thing. When matter moves in an accelerated motion, then these dimensions move, bend and fold also. They change in length, sometimes getting bigger or smaller as the case maybe. It is as if an object on the sub atomic level cannot get away from that point in space. This is the real reason that the two gravitational fields exist and it gives us a deep insight into not only the structure of space itself but of matter.

This is also an important clue as to how matter originally got its existence. All matter affects all other matter, causing all matter to vibrate in space, thereby giving rise to the two forms of gravity.

Now I know what you are going to say. Matter often travels very great distances and it would be unreasonable to assume that a dimension of space would be dragged halfway across the universe and you would be right, except for the fact that the curving only applies to when an object is accelerating or slowing down. Otherwise the dimensions allow an object to travel any distance it might happen to travel, undeterred. Under those conditions no energy is exchanged between the object and the dimensions. The best way to understand the concept is to realize that no matter where the object travels, it is still traveling through the same basic dimensions. It matters not where the object is in relationship to the dimension. This only applies to objects on the sub atomic scale. On a much larger scale of say our earth or the sun, the atoms of our planet are moving in every possible direction and the gravitational field is in all respects equal in all directions. When the earth moves through space, the actual atoms that make up it will of course be affected by the movement of the dimensions. The earth as a whole is unaffected.

The dimensions however on the sub atomic level are far too weak to make a knot in space, or an eddy or a ball. They do however come together at that exact point which we know as matter. For us to understand the very nature of matter means that we must also understand the very nature of space. The two go hand in hand. One minor point should be said and that being to create a so called wormhole, where people could travel say across the galaxy would take much more energy than we could achieve. In theory it would be possible. But I don't think we will be seeing anything like that soon. However the odds of anyone not being ripped apart by a thousand different directions, in a thousand different directions at the same time is probably zero. I would not recommend such a method of traveling, even if it was safe. There are much easier ways of reaching the stars.

Now it should be pointed out that just because the effects of gravity are instantaneous throughout the entire universe, this does not mean that events can be observed instantaneously. The act of observing can not be faster than C . Light, radio waves and other electromagnetic radiation cannot travel faster than C . The uncertainty principle affects the very act of observing anything. We have the uncertainty affecting even the very act of observing. If one was paranoid enough to assume that the entire universe was going to be destroyed in a matter of minutes, it would actually still take

many centuries for the deed to be done.

When an object travels through a gravitational field of a large object such as the sun, it travels in a predictable course. The gravitational field is after all exactly the same strength in all directions. However things change when say an object is moving through the gravitational field of say an electron. Since the gravitational field is directed only at a certain area momentarily, the object would travel in a straight line, then when the gravitational field is reestablished and this causes the object to make a jump in space. Then when the electron vibrates in another direction, the gravitational field is redirected in another direction and the object is once again unaffected by the field. This happens in a totally random fashion. In theory a particle could actually enter a gravitational field, have the field cease to exist for many times more normal in the direction in which it is traveling in and the jumps in space would be much bigger than normal. This is why an object entering the fourth dimension gains energy not in packets but as frames of reference to space itself. The so called graviton does not exist for this very reason.

On - say the sun the gravitational field actually weakens slightly as energy is taken away from the sun and transferred to an object, as it moves towards the sun. When leaving the field the object retraces the same sort of path and the energy is given back to the gravitational field. The books are squared. The field of a large object has so many particles all vibrating in every known direction and so the field is basically uniform in all directions. The gravitational field on the sub atomic level is the same as for a much larger object, except that for the very briefest of moments it is directed in only one direction and one direction only.

A very similar effect is created on the second form of gravity. Any object entering this field still gains energy by taking it away from the field itself. However at the poles of the spinning object the field is much weaker because the object is not moving as fast as at the center. Again an object composed of zillions of atoms would not be aligned in any order and the field would appear to be uniform in all directions. However on the sub atomic level we see vastly different results. Every object has a different orientation and depending on where the object entered the field would mean that energy is transferred in vastly different amounts and therefore this causes big distortions. The second form of gravity which is known as the fifth dimension is also a pulsating field on the sub atomic level, as the particle twists and turns in every direction of space.

As a little footnote it should be noted that since gravity affects all of the entire universe instantaneously, then in theory one should be able to use gravity to communicate with anyone in the universe instantaneously, anywhere, although this program has no idea how to build such a device. It would also be possible in theory to create a device that could observe another object instantaneously and in real time, even if it was on the other side of the universe. Again we have to ask if one could ever build such a device.

ESSAY 4 - WHAT IS THE FIFTH DIMENSION

When an object travels through space it must spin, even if the spinning is very slow. This is a basic principle. So when a spinning object travels through space it creates not only a gravitational field that curves to the object but also causes a curving of space around the object. It is really a second form of gravity and can be thought of as an infinite number of layers all wrapped around the object like a ball, each a little smaller, as one gets closer to the object. This field is weakest at the poles of the object, where the object is spinning much slower at the object's center. The three ordinary dimensions of space bend with the movement of the object, never moving away from the point on the object. The same can be said of the fifth dimension. It is in short a constantly changing field in origination but it's

strength is the same as ordinary gravity and a second form of gravity.

The other dimensions of space, give rise to the fifth dimension because the dimensions are attached to the object. There is exact point in space where the dimensions end and matter begins. When the object moves in a certain direction, the dimensions are forced to move with it, hence - giving rise to the fifth dimension. It is very much like looking at little balls of fruit that is in jello. When the fruit starts to move, so does the jello.

ESSAY 5 - HOW IS THE UNIVERSE CONSTRUCTED

The universe is constructed in the following manner. Now by using the basic laws of mathematics the shortest distance between two points is a straight line. The second simplest is a circle. The third is a sphere and finally the fourth is a four dimensional sphere. All the dimensions eventually return to the starting point, even as they vibrate and grow bigger or smaller. This means that the size of the universe overall is constantly getting bigger but throughout the universe there are indeed parts that are actually growing smaller. It is like a beating heart. Time throughout the universe is actually getting slower until eventually when the universe has expanded until it cannot expand anymore, then time will have stopped. It is clear at this point that the universe cannot revert back to its original state. The expansion of the universe is a onetime event.

How is our universe presently constructed? To understand how, one must understand what the effects of gravity are on space itself. First off the simplest geometric figure is a straight line. This is one dimensional. A circle is actually two dimensional creature because it can only exist in two dimensions, mainly length and width. A three dimensional circle is a sphere. A four dimensional sphere is simply a sphere that has the additional dimension of height going from the surface of the sphere, which we call the fourth dimension. In short the universe is basically a four dimensional sphere. This is why there is no end to the universe in the usual sense. The three dimensions of the sphere are all curved, although not as much as the fourth dimension and yes time itself changes as one moves through the dimensions. Simply put the universe is constructed so that if one traveled in a straight line for a very long time indeed eventually one would come back to the very same spot. It does not matter when one began this journey.

Now there are several points that must be made. First off the fourth dimension IS NOT TIME. This was a very bad mistake when the fourth dimension was named time. The fourth dimension is almost the same as the other three dimensions. The fourth dimension exists because it is impossible for the other three dimensions to form any universe that can be observed by themselves. If the universe was only a three dimensional sphere, a being on this sphere would be able to travel length and width but not be able to travel up. It would be equal to being completely flat and of course having no real existence at all.

The reason why the universe is constructed in this manner is simply because it is the only possibility. Magnetism and the strong force play no role in how the universe is constructed and so there are only the two forms of gravity left. Remember the universe uses the sum of all possibilities and that is important to note. When there is only one possibility then that has to be the solution. To start, all matter has a gravitational field and it causes space itself to curve. A light ray entering this gravitational field would of course get distorted, bent from its usual path of a straight line. However the gravitational field of any object never actually reaches zero. In theory it reaches right across the entire universe. When a light ray enters a gravitational field of say a galaxy, the effects on the light ray are felt long before it even approaches the galaxy. Eventually the light ray is noticeable bent out of shape and one would assume that once it left the grip of the galaxy that it would return back to exactly how it was before. But this is not the case. The effects of the galaxy's gravitational field

exist forever, throughout the entire universe. When the light ray reaches another galaxy, not only is the light ray bent again by that galaxy's gravitational field but it has not gotten out of the effects of the first galaxy. The effects are added on to the effects of the second galaxy. Eventually as our light ray travels throughout the entire universe, just missing black holes, stars, even planets. Eventually a very long circle is created and in an ideal universe that light ray would come back to exactly the same spot that it began its journey. However the universe would've expanded in that time and the starting point would in reality be far, far away from where the light ray ended up at. Space is curved not only in a gravitational field but curved on a much more massive scale. The universe is in short nothing more than an expanding five dimensional sphere. Why five dimensions you ask. Well there is an additional dimension known as the fifth dimension and it too has interesting effects on the universe, which we haven't gotten into yet. It is the second form of gravity.

Now one must point out that the universe is the sum of all possibilities. This means that if it was possible to somehow create a universe using different laws, then one would've created a different universe and in fact the laws of physics a very long time ago may actually have been very much different than what we have now. However so far all the equations which we will be dealing with in this paper point to a solution of one, meaning that there is only one universe and one universe only, that not only has the universe evolved but so has the actual laws of physics, meaning that the fundamental constants are in a steady change, even though it might take billions of years for such things to be noticed. If somewhere the laws of nature allow for a three headed green dragon to exist, then it either exists or did so at some point in time, or will eventually exist.

It must be pointed out that the universe over all is a perfect five dimensional sphere. However when one looks a little closer on the subject one notices that there are imperfections along the way, with dents and bumps, much like the surface of an orange that is pitted. The reason is simply that matter throughout the universe is not perfectly spread out. There are gaps. For every ten gaps of say a million light years, there is one gap that is say ten million light years. For every ten gaps of say ten million light years, there is one gap that is say one hundred million light years and so until finally there are gaps that are actually on the same order in size as the universe itself, although it can be safely assumed that there wouldn't be too many of them.

So far you probably have agreed with me and everything makes sense. However there is one other point to be made. The actual dimensions of space vibrate - all of them. They all have energy, which they get from the movement of matter. They also change in actual length and not just at or close to the speed of c . They move even when an object appears to be at rest. Yet it is probably impossible to measure such effects, since the very measuring would change the results. If the yardstick gets shorter exactly the same as the dimension, then the results would appear to be the same. But we know that they are not.

ESSAY 6 - HOW MUCH MATTER IS THERE IN THE UNIVERSE?

The size of the universe determines how much matter there is in the universe. The entire universe consists of galaxies more or less evenly spaced out throughout the entire universe, with big gaps placed every so often. In each direction there would be about 49,566 galaxies all more or less evenly spaced out about 2.3 million light years. The total number of galaxies can be worked out by the following. Let us assume that the diameter of the universe is about 114,000,878,375 light years. Then the total surface area of the fourth dimensional sphere is $4 \times \pi \times \text{radius squared}$. Therefore $114,000,878,375/\pi = \text{radius of the universe}$ or 36,287,606,620 light years. The total surface area of the universe in the first three dimensions is $4 \times \pi \times 36,287,606,620 \text{ squared} = 16,547,276,115,043,848,444,425$

square light years. Assuming that each galaxy is about 2.3 million light years apart from each other on average, then each galaxy controls a area of about 2.3×2.3 million light years or 5,290 billion light years. Next we divide 5,290 billion into 16,547,276,115,043,848,444,425 which equals 3,128,029,511 galaxies on the first three dimensions of space. Now there is of course another dimension which is the fourth dimension. To find out the total number of galaxies we must times 3,128,029,511 by 49,566 = 155,043,910,759,596 galaxies in the entire universe. It is natural to assume that parts of the universe could expand faster than the speed of light but this is not so. Now it is well known that matter is in a constant state of movement and one gets the curious relationship in which the normal three dimensions, length, width and the two types of gravity are all in a state of constant change. Not only do their lengths change but they are also in a continuous state of vibration, much like a fine wire that is tensed up and when touched it will vibrate. This is known as the music of the cosmos.

It should be noted that if there are some 155,043,910,759,596 galaxies in the entire universe, then if we assume that only one in a billion galaxies actually have one planet, with people on it, then the following things to be noted. There are a very great number of civilizations out there, all asking the same questions that we are, all wanting to know. Many of the races of the universe would be very similar, if not outright identical. The universe would follow AXIOM 1, in which all possibilities would be used up, probably thousands of times over. Now if there is more than say one hundred advanced civilizations in each galaxy which is much closer to the truth, then these numbers are even more so valid. Still the vast distances between them, the technology needed to travel the stars without dying of old age, or coming back after a million or so years, only to find your home planet a barren waste land, is probably privileged to civilizations a million times more advanced than we are. Those few civilizations would want very little to do with us.

As a further note, life as we know it is a natural part of a very long chain of events. First came to this universe the sub atomic particles, which formed atoms. Atoms eventually formed molecules. The next step was the formation of viruses. Finally single celled creatures were created. Now man is considered to be the top of the line in these chain of events. However we do know that there are much higher forms of life that have formed, that are much more advanced than mankind will ever be. There is also a further point to be made. Life as we know it has DNA. At some point life would've evolved past DNA. What exactly that would be I have no idea. The universe when it comes to life follows axiom 1. All possibilities of life have been created, was created in the past or will someday be created in the future.

The so called event horizon does indeed exist throughout this universe. However it gets smaller the closer one is traveling to C and gets bigger when one is traveling much slower than C. At exactly the speed of light there is no event horizon and the entire universe is open to observing. It would in theory be possible to put a telescope in space, put a solar sail to it and eventually when it started to reach speeds that approached the speed of light, it could send pictures of things that otherwise could never be observed and in real time, meaning that one would be observing events just as it occurred. Observation in real time is not only possible but advanced civilizations use this method all the time.

ESSAY 7

THE FINAL FATE OF THE UNIVERSE? Now since we know that the universe is basically busy converting all matter into energy, it follows that in a trillion years or so all matter will have been changed into nothing but pure energy and so we will end up with a universe of only energy and things will have returned to what we know as a idea, a concept. When this happens there will be no curving of space because there

will be no matter to cause space to curve. Energy by itself cannot cause space to curve. The size of the universe will have become something that cannot be measured by any method, since there would be no observer to do so and it would be basically endless. Even God will have become something that we cannot understand, evolved into something we cannot hope to understand. Perhaps at that point even God will have died. But such things go far beyond the scope of this paper. At that point even God will have become something we cannot fathom. A few trillion years is a very long time indeed. If there is no measuring stick, then it is quite impossible to measure anything. The fourth and fifth dimensions will have completely disappeared.

Time will also have ceased to exist and it is for this reason why the universe under these circumstances cannot convert the energy that would be stored into the three remaining dimensions and start a new universe. Everything would be at a stand still. The universe is for this reason a onetime event. It should also be pointed out that the beginning of the universe was in no way the same as its ending. They are two separate events.

We would end up with a universe that would be nothing more than frames of reference in space. This is a fact. By that time the expansion would've reached out to the point that the universe would be basically endless. It would be little comfort to know that the expansion of the universe would then at last come to an end. If this happens then the fate of the universe will have been sealed forever. All the energy would have been totally dispersed into the actual three remaining dimensions of space. This suggests that the universe is really a onetime event and that the events that are happening now in our universe are really just another stage which it must get through. Time itself will have ceased to exist under these conditions. At that point the universe would only be an idea, a thought that exists in the mind of the creator, if the creator actually still exists then. No measurement could be taken because there would be no observers. Even so the amount of matter and energy combined in this universe right from the very beginning to the very end would've stayed exactly the same. It appears that the final fate of the universe is to be washed away into a sea of nothingness and that is as it should be. It is very unclear what would come after such an event, if anything. At that stage the universe would basically be broken and unfixable. The energy cannot be converted back into matter. Maybe something else but what?

It has long been supposed that in the beginning, the true beginning before the big bang, that the universe was in very much the same state that we predict for its ending. However the universe was never in such a state in the beginning. It could not have formed matter under those circumstances. None of the forces, the two gravitational fields, the magnetic force, the strong force would exist under those circumstances. There would be nothing to work with. At this point we have to mind our P's and Q's. Maybe this is as close to an idea that we can come to. When the actual proton and electrons start to decay then it is a safe assumption that it is over.

However it should also be mentioned that the nature of the universe is such that even if all the matter will eventually be decayed into energy the universe would still maintain entropy.

ESSAY 9 - THE SPEED OF LIGHT *The speed of light or C is intertwined throughout all aspects of the universe. Now what is not widely known is that even light itself cannot travel at this speed. It actually travels several hundred miles per second less than C. Now at exactly C time itself has basically ceased to exist, as well as matter and energy. This is why nothing, matter nor energy can actually travel at this speed, let alone actually go faster than C. Without time there can be no measurement of events. To reach C is the mathematical equal to finding out the exact*

value of Pi right to the last digit. The best way to understand what is happening at this speed is to consider the following thought experiments.

THOUGHT EXPERIMENT 1 - A light ray is traveling in a universe that consists of only a light ray and great deal of empty space. What is the speed of the light particle? First off we know that the laws of this universe forbid such a event ever happening. The reason is simple. Space itself cannot exist without matter. Such a universe would have no other energy in it other than the light particle. It's easy to see that we have already put impossible demands on our experiment. However can such a event be measured under these conditions? The answer is no. However even if a observer is not around to observe the event, the event will still take place. But we know that this light particle traveling very close to C is in a different time frame, meaning that it can travel across the universe, no matter how big it is from it's point of view, instantly. Time would not exist under these conditions. We would at first assume that if there is no observer to such a event then the speed of light can be zero or a trillion miles per second, anything we want it to be. But the reality is that even if something cannot be observed does not mean that it didn't happen. In short the speed of light under even these strict conditions is exactly the same as under any other conditions. The conclusion is clear. Even without a observer the speed of light is exactly the same as we, being observers would arrive at.

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THOUGHT EXPERIMENT 2 - We now have a observer and this observer is looking at the light ray moving across the universe. What exactly does this observer note? First off the observer has been measuring exactly how long it takes for the light ray to go from where this observer is and how long it takes for the light ray to return to where the observer is, after traveling right across the universe. At first it would appear that the speed of light is directly related to the observer. However it matters not what frame of reference the observer is traveling at. The observer will always get exactly the same result. The speed of light is always exactly the same because of the time differences. If this observer decided to move to the otherside of the universe it would make little difference. If he started moving faster or slower the results would be exactly the same. Or if one prefers to state, the closer something is moving to C, the smaller space is, the smaller the universe is from that frame of reference and time has just about ceased to exist. The observer would never know it but actually would be measuring the difference's in time and the observer's frame of reference and not the size of space according to the observer.

So all movement in the universe is directly related to time. At first appearances it would appear that it is time itself that determines the speed of light. However when a light ray is traveling through space, no energy is transferred to the light particle or to space itself. Or to put it another way time remains exactly the same for the light particle - always. It is only when a object accelerates or slows down that energy is exchanged. There is no transfer of energy without time.

If a object is traveling at exactly C, it cannot be observed under any set of circumstances. The reason may not be at first obvious but this is it. Any object traveling at exactly C will have traveled across the universe instantly and would actually be in all places at all times. Not a single space in the entire universe would be void of this object's existence. This is why it would be impossible to observe such a creature and why it is impossible to travel at the speed of C, let alone faster than C. The energy needed would far out weigh the total amount of energy in the entire universe. This is also why energy in the form of packets cannot move in such a way. The uncertainly principle forbids any object from moving at this speed and the energy needed is greater than the entire universe itself. It would be very much like having mirror images repeated everywhere for all eternity, throughout the entire universe.

What is the speed of light under these circumstances? If we use the entire universe as a reference point and say that to travel the entire universe is one unit of length, then the speed C at first cannot be measured and it would naturally be assumed that it is infinity at this frame of reference. However this is not so. The speed of light would actually under those conditions be exactly the same as at any other frame of reference. It's just that it would take so much less time to travel a much smaller universe. There is however two important points that we have not discussed yet and that being that the universe according to the frame of reference of the light particle that is traveling at exactly C , is exactly the same size as the light particle itself and the entire age of the universe would be started and finished in a instant. Not only is this not possible but it is also not possible for such a particle to even slow down into a frame of reference that can be observed. Now we know why virtual particles cannot exist.

THOUGHT EXPERIMENT 3 - Consider the following. Now at speeds slightly less than C things become a little more reasonable. At just a tad below what we consider to be the speed of light, a object would not be in all places at the sametime. The universe would've expanded greatly compared to traveling at exactly at C . But the speed of light would remain unchanged.

So, just exactly what is it that determines the speed of light? Why is it not say - only one hundred miles per second, or a million? What does this say about movement, any movement in the universe by energy or matter? This is the entire key to the universe. Now let's take the equation $E = MC^2$. When matter is converted into energy a great deal of energy is created when the speed of light is what it is. If the speed of light was say only one hundred miles per second, then matter being converted into energy would of course be a lot less than it is now. So what we really have is a situation in which the speed of light is what it is because otherwise matter and energy could not exist in this universe, at least not as we know it. We actually find ourselves in a chicken and a egg situation as to which came first, matter, energy or the speed of light. All three cannot exist without their values being exactly what they are in our universe. Now in these thought experients we have naturally assumed that the speed of light cannot change - ever and that to create a universe the speed of light must be what it is and no other speed will do. This however is not exactly so. Once again we find that a observer would be unable to give us the information that we need.

A single photon of energy of the lowest possible in this universe would have a energy equal to about 1/5,000,000 th of a electron and the uncertainty of where the object actually would be in space would be about 0.000000000000032 centimeters.

ESSAY 10 - THE MAGNETIC FIELD

To begin with we have to sort out exactly what the other forces in nature are, besides the two forms of gravity. When two objects of different masses move in a gravitational field they move at exactly the same acceleration. However when two objects of different masses move in a magnetic field, the lighter object moves faster. What is happening is clear. Each object gets exactly the same amount of energy from the field and because the lighter object has less mass, it will move faster than the heavier one. There is however one fly in the ointment and that being that it takes two objects to produce the force and that the end result is that there is no force to measure when the two cancel each other out.

The magnetic field appears to be a very complex force. Opposites attract and the same forces repel each other. The force is also a exact ratio of the gravitational field, meaning that as the gravitational force increases in strength, so does the magnetic field. This is the first connection between gravity and the magnetic field. We also know that the magnetic field is not a function of the curving of space. We also have to be very careful not to make assumptions about the nature of the magnetic field that use the curving of space in any way to explain the magnetic field, since the field has nothing to do with it. This is why there is really no direct connection between gravity and the magnetic field, except for the ratio of their strengths.

At first this all seems very confusing but let's try to make sense of it all. Now we know that the dimensions of space appear to actually be attached to matter on the sub atomic scale, meaning that the dimensions move as matter moves. This is what creates the two forms of gravity in the first place. Now we know that no actual movement of space or matter can cause the magnetic field. Yet we know that the ratio of strength between the two is always maintained. Einstein was convinced that there had to be a direct connection between gravity and the magnetic field. Alas there is no direct connection, other than the ratio of the strength between the three forces. It would also be very unlikely that the humble gravitational field could give rise to a force 10 to the 42 power stronger than it. So what exactly is the magnetic field? If the magnetic field happened to be related to the curving of space, the amount of curving would be in the order of the entire universe itself. So that is definitely not a option.

To understand the magnetic field the same approach that Einstein used to unravel gravity is needed, with one exception. In the magnetic field, the bigger the mass of the object the slower it will travel in a magnetic field. This is because each object would receive exactly the same amount of energy. In our thought experiment a observer in a space ship, drops two objects, one exactly twice the mass as the other one. The smaller object will move twice as fast in this field. Now we know that the space ship is not accelerating or slowing down and in fact anything the space ship does will have no effect on what would be causing the two objects to move like they do. Light becomes polarized when traveling through a magnetic field. This is known as the Kerr effect.

TIME IN A MAGNETIC FIELD WILL GET GREATLY DISTORTED.

ESSAY 10 - MATTER

In order for us to understand how matter was created in the first place we need to know exactly what is matter. It is of course well known that matter and energy are basically the same thing, the difference being that matter is the solid state of energy. Matter cannot travel at the speed of C but of course neither can light.

ESSAY 8 - THE PLANETS ARE DRIFTING OUTWARD FROM THE SUN EVER SO SLOWLY AND OUR YEAR IS SLOWLY GETTING LONGER.

There is also one point that should be mentioned in regards to our sun, as an example. As it converts matter into energy the gravitational field of the sun weakens ever so little. However over time this has major effects on the planets. They start to gradually drift further away from the sun and over 4 billion some years this adds

up. As an example if the sun has used up - say 10 % of its mass over a course of 4 billion years, then its gravitational field would've weakened by 10% and the sun will have done its part in expanding the universe. This also means that under those circumstances the Earth, along with all the other planets would've slowly drifted out by 10% to where they are now, in the course of some four billion years. This must of course be taken into account when looking at life and how it developed. I haven't worked out any figures but it's a safe assumption that in the beginning the earth was probably several million miles closer to the sun than it is now. This of course means that it was considerably warmer and this would help to explain why it was so warm in the past and how life got started. Scientists long assumed climate change was caused by more gases in the atmosphere. This of course may very well have been but is only a very small part of the real story.

It was long supposed that the Earth's orbit has always been exactly the same, more or less from day one. But the reality is that the planet Mars as an example would've been a much warmer place several billion years ago and life actually started there before it did on the Earth, because the Earth would've been too hot. Back then Mars climate would've been not too far off of what we now have on Earth. It had a great deal of water too, which helped to keep the heat in. A 10% reduction in the mass of the sun would amount to the Earth being about 9.3 million miles closer to the sun at the beginning or about 83.7 million miles from the sun. However as for Mars the distance that it would've moved from the sun in that time span would be much greater and the effects much more noticeable. While the earth would've been too hot to support life four or five billion years ago, Mars would've been just right.

Finally it has been noted with great interest that the earth has only in the last 50 million years or possibly less, started going into ice ages. No one could understand why this is so, until it is realized that the earth has now drifted away from the sun so much that it is now at the point in which such things must occur as a normal course of events. In the years to follow it is a sure bet that each future ice age will be a little bit harsher than the one that came before it and last a little bit longer than the one that came before it. This will of course have a very deep, profound influence on life itself, at least as we know it. The days of tropic heat throughout the earth's surface are long gone and will not be back. Towards the very end of the earth's existence, life will have become almost extinct and living in conditions not too far off from what we now see on Mars. Earth will in a billion years from now become a frozen planet, with life struggling. We would like to think that the only thing that could change this outcome, at least on the short term, is man. But man is only a small wheel in the course of events of this planet and will not be around to see any of these events. The only thing that will actually change the outcome is the fact that in 1.5 billion years the sun will super nova and for a very brief time the earth will enjoy weather like it was in the good old days until the sun does expand to within ten million miles from the sun and life will have ceased to exist. But this is only a natural development in the normal course of events of this universe. Such things have happened zillions of times before in our universe and will continue to occur.

a thousand years is nothing. a million years is a medal. A billion years is a lifetime

It's too bad that mankind will never make it to the next step[