

**Editors note: the vortex thesis printed below is in its most basic form. It was intentionally written to be understandably to anyone who possesses a level of mathematics equal to trigonometry. As such, every High School Senior in America should be able to understand this proof.**

## **THE MATHEMATICS OF THE VORTEX THEORY**

### **ABSTRACT:**

*The proof of this revolutionary new vision of the universe is found in its precise mathematical explanation for the length shrinkage and time dilation effects associated with the Michelson Morley Experiment. This new vision of the universe will first prove why the length of matter parallel to the direction of travel shrinks; then it will prove why matter in the transverse direction to the velocity of travel does not shrink. And finally, it will give an exact mathematical explanation for the phenomenon of time dilation.*

The following is an excerpt from the first book in this series called, "The End of the Concept of Time!"...

### **Ch10 THE MICHELSON MORLEY EXPERIMENT**

At the beginning of this book I made the statement that it seemed as if some of the major events in my life were meant to happen to compel me to go search for the ultimate mysteries of the universe. And now, while thinking about the Michelson Morley Experiment, it made me realize that it was almost as if another impulsive action of mine – that took place years before - was meant to happen to keep me from being misinformed.

Years earlier, when I decided to quit College, I thought my rash act was purely impulsive. I was in Third Semester Physics, and had just finished studying the Michelson Morley Experiment when I got up and walked out of class. But if I had not walked out at that particular point in the curriculum of that particular course, I never would have been able to discover the error in Einstein's vision of the universe.

Like everybody else who studied Physics, eventually, I probably would have been indoctrinated into believing Einstein's ideas about the fourth dimension of time. Faced with the *supposedly* overwhelming evidence, and the never-ending insistence of today's teachers that Relativity is the truth, the whole truth, and nothing but the truth, it is possible that I would have ended up believing that his vision of time was correct. I would never even have thought of questioning the idea of time, nor realized that all of the phenomenon associated with relativity could be easily explained by an entirely different vision of matter, space, time, energy, and the forces of nature.

Perhaps I might have fallen into the trap that traps so many: human arrogance. I might have believed that since I had worked so hard to understand the workings of the most difficult theory in all of science, I was to be congratulated, that perhaps there is nothing wrong with it after all. I might have even tried to incorporate it into the vision of the universe I was trying to deduce, and in the end, would have ended up no better off than any of the physicists who dogmatically teach this theory as doctrine.

Luckily that was not the case.

Although I ardently admired Einstein, I never became a believer. A common trait I unknowingly held with a man recognized as the greatest scientist of his era: Albert Michelson.

Michelson was a Nobel Prize winning physicist who became famous for creating what has come to be known as the "Michelson Morley Experiment": one of the most important experiments ever

conducted in science.

Tragically, this was an experiment most of the people of the world have never heard about. Which is a shame, considering that *the explanation of this one scientific experiment alone forces us to define precisely how matter, space, and time are constructed – definitions which are then used to explain how the entire physical universe is constructed. Explanations, which both directly and indirectly affect the lives of every person upon this planet!*

Although it is hard to believe, the explanation of this one relatively unknown experiment was instrumental in creating mankind's present vision of matter, space, and time. Since the physicists of the Twentieth Century also considered this experiment to be a proof of Einstein's Theory of Relativity (never mind that Michelson rejected Einstein's explanation) a little background information on both how and why it was conducted is essential.

It all began towards the end of the last century, when two prominent American physicists, Albert Michelson, a Nobel Prize winner, and Edward Morley, his colleague, devised an experiment using mirrors and light to detect the presence of the "Aether wind".

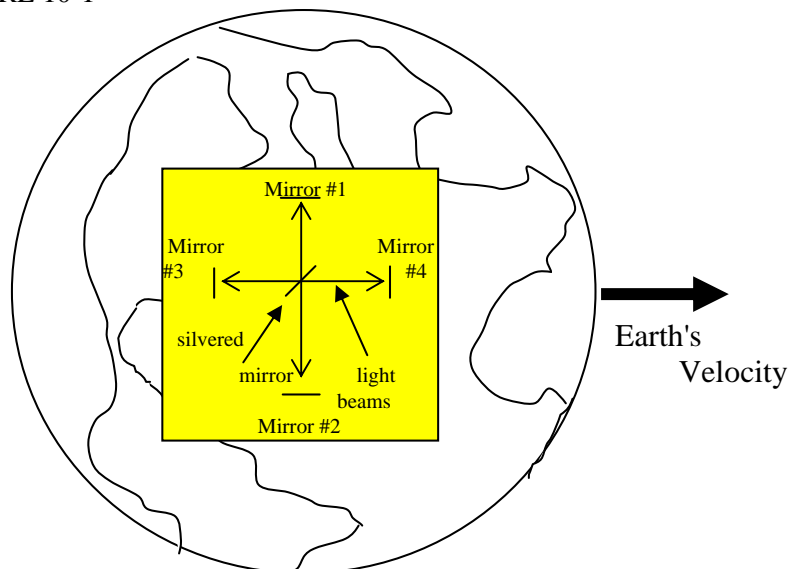
Just as a ship moving through the ocean creates a wake, the scientists of that era believed the earth created a similar wake or a "wind" as it moved through the "Aether" - the name given to the substance they thought space was made of.

To detect the presence of the "Aether wind," Michelson and Morley first built a relatively simple apparatus. This consisted of two sets of mirrors set at equal lengths, and arranged perpendicular to each other. Between them was a lightly silvered mirror that allowed the light beams to penetrate through it as well as be reflected off of it. The basic idea was to turn on a light source, allow a beam of light to first shine on the silvered mirror where it then split - reflected off both sets of the other mirrors, and was then reassembled at a target.

Because the earth is orbiting the sun at an average speed of approximately sixty-six thousand miles an hour, when mirrors three and four (see FIGURE 10-1) were parallel to the Earth's direction of motion and one and two were perpendicular to it, the mathematics indicated that the travel times between mirrors one and two should be shorter than the travel times between mirrors three and four. And the interference pattern created by the different arrival times of these two beams of light at the target should indicate this result, but it was never seen! To Michelson and Morley's surprise, the pattern they saw at the target indicated that there was no difference in the travel times whatsoever!

[To simplify the principles involved, the following abbreviated diagram of Michelson and Morley's apparatus is placed against the backdrop of the Earth.]

FIGURE 10-1



Although surprised, Michelson and Morley were undaunted. They simply built a better apparatus and tried the experiment all over again. But just as before, they still came up with the same results.

Although other people might have quit, Michelson and Morley didn't! They improved the apparatus and tried again; and again and again, but to no avail. The pattern on the screen continued to show that the two beams were always traveling at the same speed.

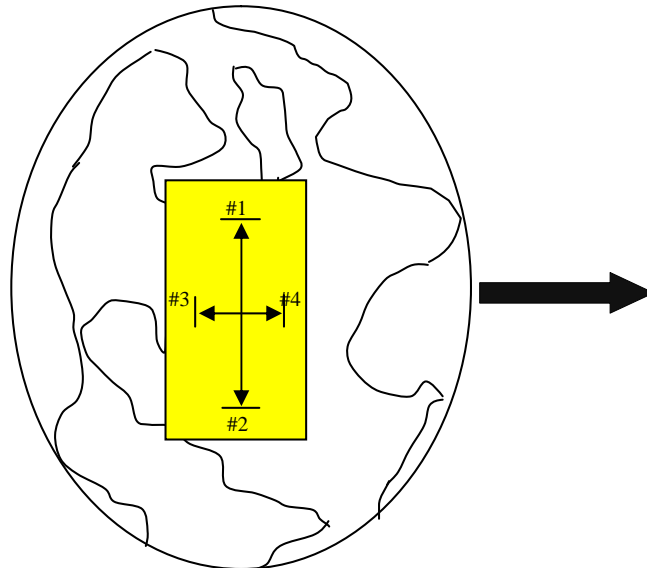
But Michelson and Morley were true believers; they never gave up. They tried for twenty years! They improved their apparatus until it was so sensitive to vibration, it had to be placed upon a two-ton slab of sandstone floating in a pool of mercury because an ox pulling a cart down a road close to their building would interfere with it. But even that didn't change the results!

No matter how long they tried, and no matter how sensitive they made their apparatus, the results were always the same - the differences between the travel times they expected to see were not seen. There was no difference between the two travel times whatsoever!

Enter George Fitzgeralds and Hendrik Lorentz.

Fitzgeralds an Irish physicist, and Lorentz a German physicist, both working independently of each other, thought of a way that would make both of these travel times equal. Each one of them proposed that if the Aether wind compressed the matter of the earth in the direction of travel by "just the right amount", the distance between mirrors #3 and #4 would shorten. This shorter distance would then shorten the travel time of the light beam moving between these two mirrors, making its travel time equal to the travel time of the beam moving between mirrors #1 and #2.

Figure 10-2



Also, since the Earth speeds up slightly and slows down slightly during the different seasons as it orbits the Sun - although these changes are incredibly minute - because Michelson and Morley's apparatus was now so super sensitive, this change should have been seen too. But it wasn't.

Because it wasn't seen, Lorentz further suggested that if time "itself" somehow slowed down by "just the right amount" no change would ever be noticed. However, the seemingly improbable idea that the Aether wind somehow compressed matter "just enough" to fool the instruments was seen by other physicists as an "ad hoc" solution to the problem and was dismissed as being too contrived.

Since no other explanations were available, no other explanations were presented. And the

world of physics had to wait for a solution.

But they didn't have to wait long. When Albert Einstein's ideas began to influence the world of physics, the solution to the problem seemed apparent. According to Einstein's vision of the universe matter was made of something, space was made on nothing, and time was relative and existed as a fourth dimension of the universe he called "space-time." This meant that there was no Aether and no Aether wind. This also meant that the measurement of time was relative to the speed of the observer. And when these ideas were combined with his brilliant deduction that the measurement of the speed of light was the same for all observers, scientists finally believed they had finally found the explanation for the Michelson Morley experiment.

*However*, even though Einstein's vision of matter, space, and time has been extremely successful in some areas, it has utterly failed in others. The most important of these failures is its inability to unite the four forces of nature into one "grand unification theory", or adequately explain why they cannot be united: a seemingly trivial technical observation that acquires a status of great philosophical importance. Even those who are uninitiated into the workings of science can easily understand that the true vision of the universe must be able to explain not just some of the phenomenon of nature, *but all of it! Every last bit of it!*

A deduction Einstein himself must have been acutely aware of because he spent most of the remaining years of his life trying to unite the forces of nature into his own personal vision of matter, space, and time. Sadly failing in the attempt because there was no chance of succeeding! No chance of succeeding because Einstein's failure was not due to a lack of ability or effort, but rather due to his erroneous vision of one of the basic building blocks with which he used to construct *his* vision of the universe – "time!"

Because if time is not a fundamental principle of the universe; if time is a function of motion and cannot exist apart from motion, then time is NOT a building block of the universe, and cannot be used as one. If time is a function of motion, it is a phenomenon created by motion. Hence, it cannot be used as the fundamental cause to explain time dilation. If it cannot, then the length shrinkage and time dilation effects proposed by Lorentz in response to the results of the Michelson Morley Experiment, *are being created by the increased velocity of the atoms themselves as they move through space!*

Consequently, there must exist a hidden, intrinsic relationship between matter, space, and velocity that nobody previously suspected. A secret relationship, which unites rather than separates these three seemingly different aspects of the universe's construction! A relationship whose interactions create an exact mechanical and mathematical explanation for the results of the Michelson Morley Experiment - a relationship that reveals the *True Vision of the Universe!*

I was excited. Although science presently believes the true vision of the universe was discovered when Einstein introduced the Theory of Relativity, I now knew this was wrong.

The true vision of the universe had not been discovered at all! It was still there, waiting to be found! A sight no man has ever seen before!

Suddenly, I felt like an explorer of old. An adventurer who hears a legend about a lost continent at the end of the world; who gets a ship and sails towards the horizon in search of whatever awaits him.

But this time, it would be no ordinary quest. This would be the ultimate quest for the ultimate prize! The ultimate search for the ultimate vision of everything! And like the view of the Grand Canyon, or Niagara Falls, the ultimate vision of the universe must be an awesome spectacle to behold.

But to be able to be the first man to ever see this true vision of the universe, I realized I and I alone would have to first discover the secret of how matter, space and velocity are related.

Why me? There was no one else! Those who can discover it won't, and the rest never will.

Those scientists who are capable of discovering the answer are unwilling to challenge the Theory of Relativity. They are either true believers in Relativity, and don't think there is anything wrong with it, or they are afraid of the loss of their credibility if they make any controversial

statements to their colleagues. So it is sad to realize that those who can discover the truth about the universe - won't!

Unfortunately, the rest of the people in the world will never discover the truth either. They do not have the powerful motivation, the "time", or the desperate need to discover the answer to this problem. Therefore, I knew it was up to me.

To me! Suddenly, I felt alone. Who in the hell was I? I was not a physicist.

Feeling inept, I desperately wanted an ally, a seeker like myself. Someone who passionately sought the truth and would go anywhere and do anything necessary to discover it! But I knew no help would be forthcoming. I was alone. It was a hard truth to accept, but after I had reluctantly accepted it, what the hell!

I had started alone, and I must now finish alone. I had come much further than I had ever expected. A little bit further wouldn't hurt. The hardest part of any journey is the last part. So I prepared myself for the finale.

I bought books on math and physics. I reviewed calculus. I went to the library and studied the latest discoveries in science. To increase my self-confidence I lifted weights in the evening, and did push ups and sit-ups in the morning. I didn't crawl out of bed; I leaped out of bed. I fasted, lost weight, and felt good. To be a winner, you must first feel like a winner. To succeed, you must already be a success.

And I was successful beyond my wildest dreams!

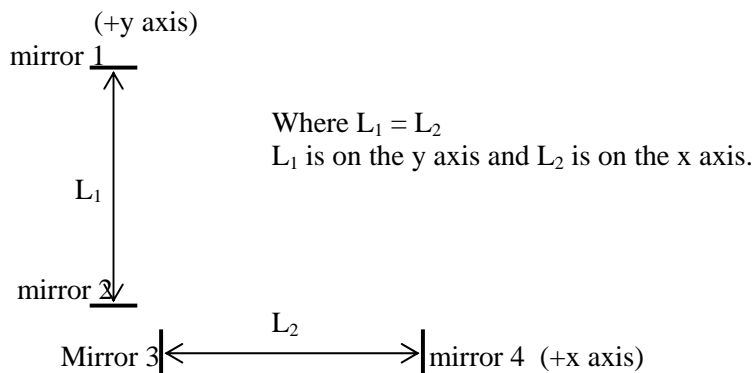
I took a mental journey through the innermost foundations of the physical universe. I saw what no man has ever seen before, and I discovered the answers to the greatest mysteries of both science and religion!

[End of Ch. 10]

## The combined mathematics of Lorentz and Fitzgeralds explanation of the Michelson Morley Experiment

As previously stated, in the Michelson Morley Experiment two sets of mirrors were set at right angles to each other, and the lengths between the mirrors were made equal. Consequently, in a frame of reference which is **not moving**, the round trip time it takes for a beam of light moving at velocity ( $c$ ) to travel up and back along the length ( $L$ ) between either set of mirrors should be the same not matter what direction the mirrors point:

GIVEN:



SINCE: (rate)(time) = distance and rate =  $c$ ; time =  $T$ ; distance =  $L$

THEN:  $(c)(T) = L$

Travel time along the x axis:  $cT = L$   $T = L/c$  (time up); and  $T = L/c$  (time back)

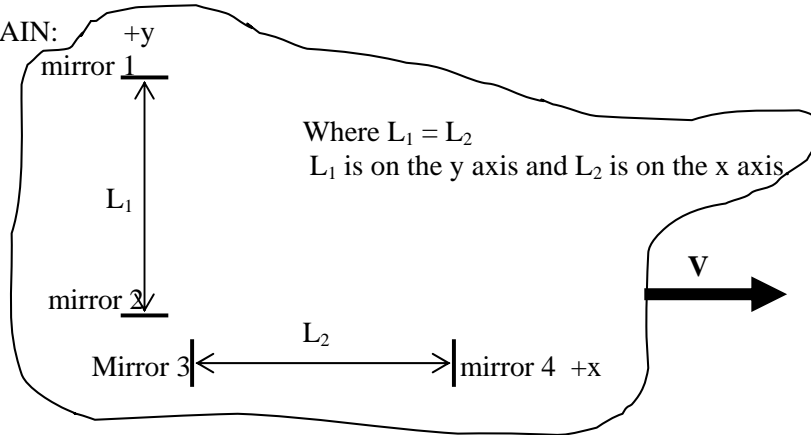
The round trip time for light moving between mirrors 3 & 4:  $T = L/c + L/c = 2L/c$

Travel time along the y axis:  $cT = L$   $T = L/c$  (time up); and  $T = L/c$  (time back)  
 The round trip time for light moving between mirrors 1 & 2:  $T = L/c + L/c = 2L/c$

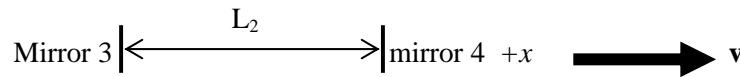
Since both times are equal to  $2L/c$ , the round trip times for the light between both sets of mirrors are equal.

However, in a frame of reference that **is moving** at velocity  $\mathbf{V}$ , both of these times change:

GIVEN AGAIN:



**Part 1:** When moving at velocity  $\mathbf{V}$ , the  $x$  axis is parallel to the direction of velocity:  
 As proven above, when the apparatus was not moving, the time up was equal to the time back.  
 However, in a frame of reference moving at velocity  $\mathbf{V}$ , both of these times change:



When moving at velocity  $v$ , because the  $x$  axis is parallel to the direction of velocity, the time up is now equal to the length ( $L$ ) divided by the speed of light ( $c$ ) minus velocity ( $v$ ):

$$T = L / c - v \text{ (time up)}$$

The time back is now equal to the length ( $L$ ) divided by the speed of light ( $c$ ) plus the velocity ( $v$ ):

$$T = L / c + v \text{ (time back)}$$

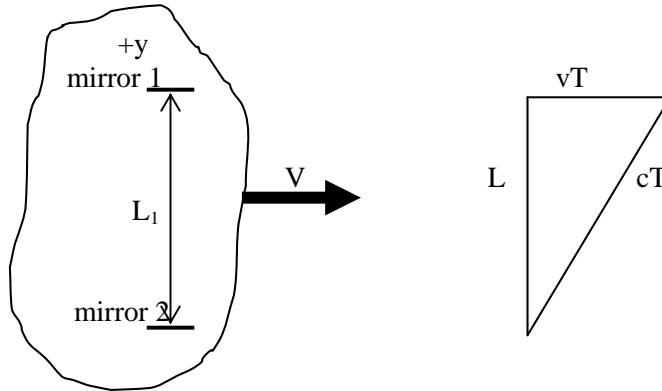
Since:  $T_p = [L / c - v] + [L / c + v]$  Where  $T_p =$  total round trip time in the direction parallel to the velocity of travel.

$$\text{Then: } T_p = 2Lc / (c^2 - v^2)$$

$$\text{Or expressed in another form gives: } T_p = \frac{2L}{c} \left[ \frac{1}{1 - v^2 / c^2} \right]$$

**Part 2.** When moving at velocity  $V$ , the  $y$  axis is *perpendicular* (transverse) to the direction of velocity:

Consequently, when moving at velocity  $v$ , because the  $y$  axis is perpendicular to the direction of velocity, the time it takes for a beam of light to travel up and back between mirrors 1 & 2 is now found using the Pythagorean Theorem:



Where:  $(cT)^2 = (L)^2 + (vT)^2$  (time up)

$(cT)^2 = (L)^2 + (vT)^2$  (time back)

Solving for time (T) in the above equations gives:

$$T = \sqrt{\frac{L^2}{c^2 - v^2}} \quad (\text{time up}) \quad T = \sqrt{\frac{L^2}{c^2 - v^2}} \quad (\text{time back})$$

Combining the time up with the time back gives total transverse time ( $T_t$ ) for the light to make the round trip between mirrors 1 & 2:

$$T_t = 2\sqrt{\frac{L^2}{c^2 - v^2}}$$

Or, expressed in another form gives:

$$T_t = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2/c^2}} \right]$$

**CONCLUSION:**

Since the parallel round trip time  $T_p = \frac{2L}{c} \left[ \frac{1}{1 - v^2/c^2} \right]$  is greater than the transverse round trip

time  $T_t = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2/c^2}} \right]$ , the parallel trip takes longer than the transverse trip. However, as

already noted, when Michelson and Morley made their experiment, no change was observed. Hence, both Lorentz and Fitzgeralds both proposed that if the length parallel to the direction of

travel shrank by an amount equal to  $\sqrt{1 - v^2 / c^2}$  then both travel times would be equal:

$$T_p = \frac{2L}{c} \left[ \frac{1}{1 - v^2 / c^2} \right] \left[ \frac{\sqrt{1 - v^2 / c^2}}{1} \right] = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2 / c^2}} \right]$$

Since the transverse time is also equal to:  $T_t = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2 / c^2}} \right]$

Then:  $T_t = T_p = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2 / c^2}} \right]$  and both travel times would be equal.

ALSO:

Since the earth speeds up and slows down by about 1 part in  $10^8$  from summer to winter as it rotates the Sun, Lorentz further suggested that even this change would not be noticed if time was also slowed by a factor of  $\sqrt{1 - v^2 / c^2}$  :

$$T_p = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2 / c^2}} \right] \left[ \frac{\sqrt{1 - v^2 / c^2}}{1} \right] = 2L/c$$

$$T_t = \frac{2L}{c} \left[ \frac{1}{\sqrt{1 - v^2 / c^2}} \right] \left[ \frac{\sqrt{1 - v^2 / c^2}}{1} \right] = 2L/c$$

Making  $T_t = T_p = 2L/c$  (The same as if there were no motion at all!)

Although many people are unaware of it, the mathematics you have just seen predates the Theory of Relativity. Lorentz and Fitzgeralds proposed length shrinkage and time dilation effects before Albert Einstein ever published his famous theory. Unfortunately, although Lorentz and Fitzgerald revealed that length shrinkage and time dilation could explain the results of the Michelson Morley Experiment, they could not explain *how* it occurred.

As stated before, like the other scientists of their era, Lorentz and Fitzgeralds believed space was made out of a substance called the Aether and matter was made out of solid particles. Using this vision of the universe, they then reasoned that as the Earth moved through the universe, the Aether was somehow compressing matter “just enough” to change the distance between Michelson and Morley’s mirrors and fool their instruments. Unfortunately, because this explanation seemed “too contrived”, it was later rejected by other scientists in favor of the explanation provided by Einstein’s Theory of Relativity with its fourth dimension of “space-time”.

However, just because people say something is wrong doesn’t mean it is wrong. Lorentz and Fitzgeralds were absolutely right, unfortunately they just had the wrong vision of how matter, space, time, energy, and the forces of nature are created – and hence, they did not know how length shrinkage and time dilation was occurring.

When one sees the correct vision of how these five “parts” of the universe are created, it is easy to explain precisely how length shrinks by a factor of  $\sqrt{1 - v^2 / c^2}$  and how time also slows down by this value.



## THE TRUE VISION OF THE UNIVERSE

The following vision of the universe is quoted from *The Vortex Theory*. These explanations are presented in their most abbreviated form. The explanation of each is discussed in much greater depth in the book.

### 4.1 Space is Not a Void

*Contrary to popular belief, space is not a void. Space is a multi-dimensional substance that everything in the three-dimensional universe is made of. This idea is not a return to the old Aether theory. As we will soon see, the space within which we exist is unlike anything anyone has ever imagined before.*

The key to discovering how *everything* in the universe is constructed is found in the construction of space.

Contrary to present beliefs, space is not a void. Space is made of something. The substance that space is made of is totally unique from our point of view. It can both stretch and flow, is constructed out of at least five dimensions, and is in a state of expansion.

Furthermore, our three-dimensional universe is not infinite. The three-dimensional universe only appears to be infinite from our perspective. The three-dimensional space in which we exist is in reality the finite surface of fourth dimensional space.

Just as a two-dimensional plane is the surface of a three-dimensional object, the three-dimensional space of our universe is the surface of fourth-dimensional space; and fourth dimensional space is the surface of fifth dimensional space, etc.

### 5.1 Matter is Made out of holes

*The present viewpoint of the universe states that protons, electrons, and neutrons are particles. This is a mistake. Protons, electrons, and neutrons are not particles. Protons, electrons, and neutrons are three-dimensional holes existing upon the surface of fourth dimensional space. Three-dimensional space flows into and out of these holes creating the electrostatic force of nature.*

The truth about matter is absolutely shocking. The matter of the universe is not “matter!”

Protons, electrons, and neutrons are not made of “something”. Instead, they are holes in space. All of the matter that exists everywhere in the universe – including the matter we are made out of – is made out of nothing at all! The stars, the sun, the earth, the planets, moons, asteroids, comets, gas clouds, and the bodies of all living creatures including our own physical bodies are nothing more than vast collections of three-dimensional holes existing upon the surface of fourth dimensional space. [NOTE: three-dimensional holes look like tiny spheres.]

### 9.1 What is Energy?

*Photons of energy are condensed packets of three-dimensional space. This packet both displaces the space surrounding it outward, and is expanding and contracting as it moves through the universe. The photon creates the particle effect; the spin of photons creates their electromagnetic effect; while the region of denser space surrounding it combined with the photon’s expansions and contractions creates its wave effect.*

It is too bad that 19<sup>th</sup> Century believers in the Aether theory got it backwards; they believed that matter was a “condensation” of space (like ice floating in water). If instead, they had said that energy was a “condensation” of space, they would have been very close to the truth!

## 10.1 The Preoccupation with the Word "Force"

*The four forces of nature are created out of less dense and flowing space. As such, they are manifestations of space itself. There is no unseen "Force" that permeates matter. Nor is force carried by "particles."*

*The shocking truth about force is that it just doesn't exist as a mysterious substance surrounding matter and binding it together.*

[Note: the creation of the four forces of nature are explained in books one and two.]

## 19.1 Time Does Not Exist as a Fundamental Principle of the Universe

*Time does not exist as a fundamental principle of the universe! It is an illusion created by motion, a function of motion, a phenomenon of motion, a shadow of motion.*

Although it is hard to believe, "time" does not exist and never has. For thousands of years, what man has called "time" is really an illusion being created by motion. Just like the revolving earth was responsible for creating the mistaken belief that the universe was circling this planet, a symphony of harmonic motions is creating the mistaken belief in the illusion called "time"!

In reality, what man calls "time" is actually a function of motion - a phenomenon created by motion and it only exists within the minds of men. A revelation possessing profound implications!

### IMPORTANT CONCEPTS

Because the proof of this new vision of the universe involves some unusual principles, the following important concepts need to be understood.

**THE NEED FOR SIMPLICITY:** here it should be said that throughout this proof we must simplify our discussions. If we don't, we will become lost in trying to accomplish the almost impossible task of attempting to visualize the almost infinitesimal movements of atoms as they respond to the equally incomprehensibly large velocity of the speed of light.

To overcome this problem, it is easier to greatly increase the size of the atoms to diameters the mind feels more comfortable visualizing, while at the same time, greatly decreasing the speed of light to a value the mind has no problem comprehending.

Because the hydrogen atom is the simplest of all atoms, and the easiest to understand, it is the example used in the rest of this text. However, it must be understood that, just like the hydrogen atom, all protons and electrons *in* all atoms everywhere are connected by two vortices of flowing space [see ENCLOSED LOOP on next page]. Therefore, the principles using the hydrogen atom as the example apply to all other atoms as well.

**THE BACKDROP OF SPACE:** In Einstein's Theory of Relativity, space was made of nothing and all motions were relative to each other and still are - for all practical, large-scale human observations. However, in the Vortex Theory of matter, since space is made of something, all of the motions in the subatomic world are made in reference to the space immediately surrounding it. Even though over vast distances the proportions of 3d space are expanding, for very short distances, the expansion of 3d space is immaterial. Therefore, for the purposes of this discussion, 3d space can be considered to be at rest. As such, it is a reference referred to as the "BACK-DROP OF SPACE" to which all motions in the subatomic world can be compared.

**THE PHENOMENON OF TIME AS A MEASURING TOOL:** although the Vortex Theory proposes that time does not exist as a fundamental principle of the universe, the phenomenon of time can still be used as a measuring tool.

Because a clock uses or creates a harmonic motion, this harmonic motion can be used to measure the LENGTH between random motions. Hence, the use of time in the following

formulas does not conflict with the original proposal.

**THE ENCLOSED LOOP:** when a proton captures an electron, the electromagnetic force pulls these two holes together creating a hydrogen atom. The space that flows into and out of them forms two vortices of flowing 3d (three-dimensional) space. 3d space, in the form of a vortex, flows from the electron through 3d space and into the proton. Then it flows out of the proton and into 4d (fourth dimensional) space. And finally, in the form of another 3d vortex, it flows back through 4d space to the electron, completing the circuit.

This circulation creates an **ENCLOSED LOOP**. The circulating flow begins, and the volume of flowing, 3d space within the two vortices remains trapped, creating a **CONSTANT VOLUME**.

This constant volume does not change. If it did, atoms would possess electrostatic charges. Hence, the volume of 3d space within this enclosed system remains the same no matter how fast the atom moves.

Because the radius of the atom is the length of one of the vortices, the radius of the atom now becomes a function of the maximum volume of space per unit of measured time that can flow from the electron to the proton, or from the proton to the electron without bunching up or backing up around either particle. (A situation that does not appear to happen, for if it did, its **ACTUAL** velocity would drop below the speed of light. Which doesn't happen. If it did, the electrostatic charges on protons and electrons would be variables instead of constants.)

Also, the fact that the electron and proton are of different sizes in no way effects our calculations. The same volume of space flowing out of one particle flows into the other. [In *The Vortex Theory*, it is shown how this vortex is cone shaped with different densities at each end.]

## **PART 1 THE MAIN FORMULA**

[Part 1 tells how the formula used to describe the expansion and contraction of the vortices was discovered.]

### **1. HISTORICAL BACKGROUND:**

A hundred years ago, the results of the Michelson Morley experiment created havoc in the world of physics. In an effort to come up with an explanation, Lorentz and Fitzgerals, both working independently of each other, came up with the following proposal: each man stated that one possible explanation for the unusual effect of seeing no difference in the travel times for the beams of light traveling between the two sets of mirrors set perpendicular and parallel to the direction of travel - would be the shrinkage of matter parallel to the direction of travel. They both stated that if exactly the right amount of shrinkage occurs, the parallel beam that is moving slower than the perpendicular beam has less distance to travel, allowing it to arrive at the target at the same time as the perpendicular beam that is moving faster.

$$L_1 = \text{original length}; L_2 = \text{new length} \quad L_2 = L_1 \sqrt{1 - v^2/c^2} \quad (1)$$

Because Michelson and Morley's experiment was accurate enough to detect a change in the Earth's velocity as it speeds up or slows down during its orbit of the Sun; because no change was seen, Lorentz further suggested that if time slowed down by a certain amount, this change should also be seen:

$$T_2 = \frac{T_1}{\sqrt{1 - v^2/c^2}} \quad (2)$$

$T_1$  = original time;  $T_2$  = slower time

Informatively, even though they both worked out the mathematics of exactly how much it would have to shrink, but unfortunately, they could not tell *why it shrank*. They could only say that they believed the "Aether" wind was compressing the earth just enough to fool the instruments of Michelson and Morley. Because this explanation seemed contrived it was labeled "Ad Hock" and dismissed.

This dismissal was extremely unfortunate because they were exactly right but for the wrong reason. Matter does indeed shrink, but for a reason Lorentz and Fitzgeralds never suspected.

## 2. HOW DOES MATTER SHRINK:

So how does matter shrink? Furthermore, why does it shrink by EXACTLY THE RIGHT AMOUNT to make it appear as if it never shrank at all?

To answer these questions, it must first determine what is happening when the atom is not moving. Then, it might be possible to determine what conditions are changing when the atom is moving.

## 3. CONSTRUCTION OF THE HYDROGEN ATOM.

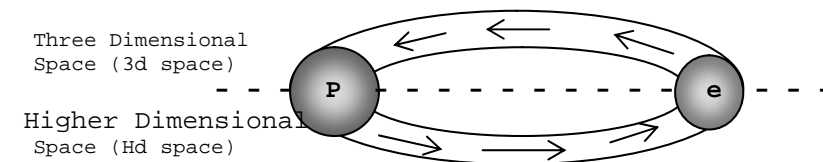
To accomplish this task, we examine the internal workings of the hydrogen atom. As seen from the Vortex Theory, a hydrogen atom is made up of a 3d hole bent into higher dimensional space (the proton), a 3d hole bent out of higher dimensional space (The electron), and two flowing vortices of 3d space flowing between them. These two vortices flowing in opposite directions to each other create an ENCLOSED LOOP of circulating space. This enclosed loop contains a fixed volume of flowing space. [see figure A-1]

## 4. SINCE THE CHARGES ARE EQUAL, THE FLOWS ARE EQUAL

[Note: because the proton and the electron both possess the same electrostatic charge, *the same volume of 3d space is flowing into and out of each hole*. Therefore, even though the one particle is larger than the other, the cross sectional areas of the space flowing into and out of each particle are mathematically equal.][Editors note: the vortices are actually cone shaped but for simplicity sake, they are drawn as tubes.]

The vortices, the particles, and the direction of their flows can be illustrated in the following drawing:

FIGURE A-1



## 5. CALCULATING THE FLOW:

Since the velocity into either particle equals the velocity out. And since the cross sectional area at any place on the length of either vortex *contains the same volume* of 3d space flowing through it, the volume of the flow into and out of each particle can be calculated in the following way; since the flow of a fluid is equal to the cross-sectional area multiplied times its velocity, then:

$$F_L = Av \quad (3)$$

Where:  $F_L$  = flow

$A$  = Cross-sectional area

$v$  = Velocity

## 6. SIMPLIFYING EQUATIONS:

To further simplify all calculations in **this proof**, the radius of the hydrogen atom has been greatly enlarged to a value of ONE FOOT. The cross sectional area is ONE SQUARE FOOT. And the velocity of the vortex - the speed of light (C) - has been greatly reduced to ONE-FOOT PER SECOND.

(Also, because we are interested in how the atom shrinks at velocities approaching the speed of

light, the path of the electron about the proton is irrelevant to our discussion. Only the position of the electron on the shell is important for our proof. How the electron reached that position does not effect our results nor violate the Heisenberg Uncertainty principle.]

#### 7. VOLUME IN EQUALS VOLUME OUT:

When the atom is NOT MOVING in relation to the BACKDROP OF SPACE, using the units in the above paragraph, the volume of space flowing INTO or OUT of either particle for any position of the electron on its shell found using formula (1) and is equal to:

$$V_i = V_o \quad (4)$$

$$\begin{aligned} \text{Where: } V_i &= \text{volume flowing in} = (\text{area})(\text{velocity}) \\ V_o &= \text{volume flowing out} = (\text{area})(\text{velocity}) \end{aligned}$$

Note, if the volume flowing into the proton did not equal the volume flowing out of the electron, the electron would have a less charge than the proton. If this were so, when a proton captured an electron, not all of the electrostatic charge would flow into the proton and all hydrogen atoms would have charges. However, since all the charge flows into the proton from the electron, the charges of both are neutralized.

Also, if do to some unforeseen circumstance, not all of the flow into the proton flowed out of the proton, or say not all of the space flowing into the electron flowed out of the electron; because of the speed of the circulating flow, the losses would add up quickly and soon there would not be enough flowing space to flow into or out of either hole.

*Note too, that the Flowing Volume "K" is a constant because it is equal to the electrostatic charge of electrons and protons.*

**For the purposes of our proof**, the flow of 3d space into or out of either particle is equated to the constant value of ONE CUBIC FOOT PER SECOND. This constant represents the value of the electrostatic charge on either the electron or the proton in free space. Since these values are always measured the same no matter what the speed of the "reference frame" the particle is measured in, this value will always be a constant. Hence, the measured volume of space flowing into or out of a particle is always the same no matter what reference frame it is measured in. In other words, just as a traveler in the fast moving reference frame of a spaceship measures the speed of light as a constant value, he also measures the charges on the electrons and protons within his ship as constant values too.

#### 8. FACTORS EFFECTING THE VOLUME OF THE FLOW:

Because the two vortices have created an entrapped circulating flow of CONSTANT VOLUME, changes in their lengths create changes in the cross sectional area of the flow. [As the length is shortened, the cross-sectional area increases, and visa versa.] The change in the cross-sectional area of the flow creates changes in the volume of the flow. Therefore, to obtain the correct flow into or out of the electron or proton per unit of measured time the volume must be divided by the LENGTH of the vortices. Also, when the atom is not moving, because the length of the vortices are equal to "one" radius of the atom, the actual change in length is not as important as its percentage of length change.

#### 9. DIVIDING FLOW BY LENGTH:

The size of the atom is so incredibly small that changes in its length are meaningless to us unless we have something to reference them to. Hence, by using a percentage of length change and then changing this value into a decimal, we do not have to know the actual microscopic value of the length change that occurs. Instead, we can say that the diameter of the atom shrank to 50% if its size, or to .5, (one half) of its original length. These are values we can easily relate to.

Consequently, the length of the flow is divided by its unit of length to change it into a PERCENTAGE of the radius:

$$F_L = \frac{Av}{[L/L_U]} = k \quad (5)$$

Where: L = length  
L<sub>U</sub> = unit of length

#### 10. MULTIPLYING BY "TIME":

Note: even though "time dilation" will be discussed later, its effects are intertwined with length shrinkage and must be used here. This is necessary because the length of a *measured second* increases at high velocities. Consequently, a larger volume of space now flows per second of MEASURED time. Therefore, the volume must be multiplied by the amount a measured second increases at this high velocity:

$$F_L = \frac{Av}{[L/L_U]} \cdot \sqrt{\frac{1}{1 - V^2/C^2}} = k \quad (6)$$

Where: V = velocity  
C = speed of light

[Note: these time dilation effects are equal to the slower apparent velocity of the round trip time of the two vortices and are not a function of "time". [see **Table #3**]]

#### 11. THE "PHENOMENON" OF TIME IS REAL:

[Note too: It should be reiterated that this book is not being written to dispute the "phenomenon of time" (which does exist as a real illusion). But rather, to show that time only exists as a function of velocity, and does not exist upon its own as a fundamental principle of the universe. Consequently, the use of time (as a stopwatch) in this formula is to MEASURE the distance between two events in exactly the same way as a yardstick measures the distance between two objects.]

#### 12. THE FLOWING VOLUME:

To simplify our calculations, since the value of the cross sectional area of the vortex is multiplied by its change in velocity when the atom is moving, this variable is designated the FLOWING VOLUME (F<sub>v</sub>), in what can now be called the MAIN FORMULA:

#### 13. THE MAIN FORMULA:

$$F_L = \frac{F_v}{[L/L_U]} \cdot \sqrt{\frac{1}{1 - V^2/C^2}} = k \quad (7)$$

Where F<sub>v</sub> = Av = Flowing Volume

#### 14. THREE IMPORTANT POINTS OF VIEW

As was previously explained in Chapter 18, instead of just one vision of the universe (the relativistic vision) - there are actually three! Consequently, assuming that a hydrogen atom is part of a spaceship, when the ship begins to move at velocity V, to understand why this atom, and the rest of the ship change shape, this hydrogen atom must be observed from all three different points

of view *simultaneously*:

- A. The omnipresent point of view from higher dimensional space. [A Godlike view: seeing all, and knowing all.]
- B. The point of view from a traveler inside the ship. [The Einsteinium point of view.]
- C. The point of view from inside the electron or the proton.

## PART II

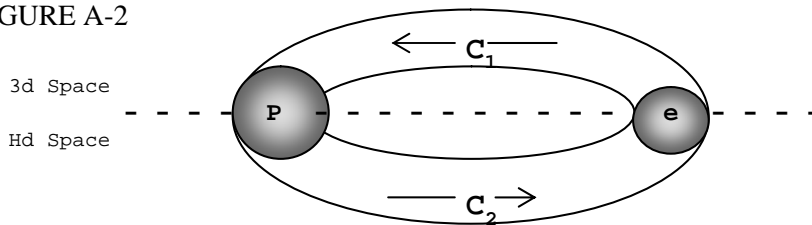
### PARALLEL AND PERPENDICULAR TO THE VELOCITY OF TRAVEL

[Part two of the proof contains the mathematical analysis of the motions, contractions, and expansions of the two vortices of flowing space within one hydrogen atom that is assumed to be part of a spaceship moving through space.]

#### 15. WHEN THE ATOM IS MOTIONLESS:

When the space ship is not moving, when it is motionless in reference to the *backdrop of space*, the atom looks as it does in the figure below:

FIGURE A-2



Where: [C1 represents the speed of the three dimensional vortex]  
 [C2 represents the speed of the higher dimensional vortex]  
 (C represents the speed of light)

#### 14. THE MOTIONLESS ATOM AS SEEN FROM THE THREE POINTS OF VIEW:

The three viewpoints listed in PART 14 are used to view the atom as seen above in PART 14.

A. From the omnipresent point of view, all three of these values are equal:

$$[C1 = C2 = C]$$

B. From the traveler's point of view things are different. He cannot see either vortex, nor could he measure the round trip time if he could. The best he can do is measure the round trip time of light between mirrors (perform the Michelson Morley experiment within his spaceship). (And if he does, he finds the speed is still equal to "C", the speed of light.)

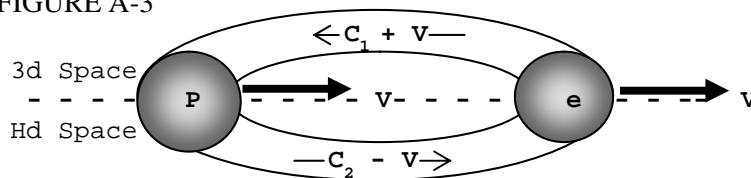
C. From the point of view within the electron or proton, all three of these values are equal: [C1 = C2 = C]

However, when the atom begins to move at velocity V, the situation changes dramatically:

#### 15. WHEN THE ATOM IS MOVING THE THREE VIEWPOINTS CHANGE:

When the atom is moving at velocity "V", the three viewpoints are no longer the same.

FIGURE A-3



A. From the omnipresent point of view, the velocities of the two vortices are still equal: C1 = C2. Even though everything is moving, nothing, neither the proton, the electron, nor the flowing vortices are moving faster than the speed of light.

B. From the traveler's point of view within the spaceship, everything appears normal. The traveler cannot see what is happening within the atom. He can only make observations on what he can observe. So for him, everything still appears exactly as it was, nothing has changed.

Since it will be shown that length shrinks, and the measurement of time slows down, if he again performs the Michelson Morley experiment, nothing appears to be any different than before. The round trip of the light between the mirrors is still measured to be equal to "C", the speed of light.

C. But from **INSIDE** the electron or proton, the velocities of the two vortices now **"appear"** to be drastically different:

$$V_{in} = C - V \quad (8)$$

$$V_{out} = C + V \quad (9)$$

Where:  $V_{in}$  = Velocity into electron;  $V_{out}$  = Velocity out of electron

#### 16. WHY ARE THERE THREE DIFFERENT POINTS OF VIEW?

The reason why the same set of circumstances creates three completely different points of view is explained in the following way:

A. From the omnipresent point of view, the actual speed of the vortices remains the same. Even though the two particles are now moving at velocity "V", **NOTHING IN THIS SYSTEM IS MOVING FASTER THAN THE SPEED OF LIGHT!**

For example: if an imaginary mark could be placed upon the space flowing out of the electron, it would reach the proton quicker, not because it was flowing faster, but rather, because the proton is moving towards it. Even though such a mark arrives at the proton faster than it would if the atom was not moving, the actual velocity of the vortex has not changed: **IT IS STILL FLOWING AT THE SPEED OF LIGHT, "C"**.

The opposite is true for a mark placed upon the space flowing out of the proton. Since the electron is moving away from this mark, as this mark moves towards the electron, it now takes longer to arrive at the electron than it would if the atom was not moving. Even so, it must always be remembered that the vortex is **STILL FLOWING AT THE SPEED OF LIGHT, "C"**.

B. From the traveler's point of view within the spaceship, nothing has changed. Again, since it will be shown that the length of the ship parallel to the direction of travel shrinks, and a measured second slows down, when the traveler again measures the time it takes for the light to travel between the two sets of mirrors he has set up to perform the Michelson Morley experiment, he still sees no difference. The result he views is the same we view here upon the earth: unless he looks out a window, it appears as if the spaceship is not moving at all.

C. **HOWEVER**, from the point of view within the electron (or proton), things have changed radically. From this viewpoint, the electron is not moving. Consequently, the space flowing into the electron now appears to be entering at the **APPARENT VELOCITY** of C-V, and exiting at the **APPARENT VELOCITY** of C+V! (The opposite is true for a viewpoint within the proton.)

#### 17. NOTHING IS MOVING FASTER THAN THE SPEED OF LIGHT!

And again, it is extremely important to understand that when the atom is moving, **NOTHING, NO PART OF THE ATOM OR ITS VORTICES ARE MOVING FASTER THAN THE SPEED OF LIGHT**. The vortices are still flowing at the speed of light. However, because the positions of the two particles are constantly changing, from the viewpoints **within** the electron and the proton, the velocities of the two vortices are now entering and exiting the particles at different apparent velocities. Hence, the volume of space flowing into a particle no longer equals the volume flowing out of a particle. If nothing changed, an impossible situation would develop where the flow out of a particle would exceed the flow into it. It would be analogous to having a valve where one gallon per second flowed in, and five gallons per second flowed out.

The only way for flowing space to avoid this disparity, is to have some of the volume from the



faster flow add to the volume of the slower flow, then, the volume into and out of each particle remains equal. The calculation of this value has been dubbed - THE FLOWING VOLUME.

18. CALCULATING THE FLOWING VOLUME PARALLEL TO THE DIRECTION OF TRAVEL:

When the electron and the proton are in the positions seen in figure 2-1 making them parallel to the hydrogen atom's velocity of travel, (and moving from left to right across the page), the calculation of the FLOWING VOLUME has a very simple solution:

**Initial conditions:** in the following problems, the units are as follows: **Speed of light = 1ft/sec; Length of vortices = 1ft; Electrostatic Charge of electron and proton = 1/ft<sup>3</sup>sec.**

**WHERE V = .866C**

1. The apparent velocity into the electron is first calculated:

From formula (8) :  $V_{in} = C - V$

Apparent Velocity into electron: = (1ft/sec) - (.866ft/sec) = .134ft/sec

2. The apparent velocity out of the electron is calculated:

From formula (9):  $V_{out} = C + V$

Apparent Velocity out of electron: = (1ft/sec) + (.866ft/sec) = 1.866ft/sec

3. To find the FLOWING VOLUME, the following identity is used:

From formula (4):  $V_i = V_o$

Or, (VELOCITY IN)(AREA) = (VELOCITY OUT)(AREA)

For V = .866C:

(Velocity In)(Area) = (Velocity Out)(Area)

$(.134ft/sec)(1ft^2 + Xft^2) = (1.866ft/sec)(1ft^2 - Xft^2)$

solving for X:  $X = .866$

$(.134ft/sec)(1ft^2 + .866ft^2) = (1.866ft/sec)(1ft^2 - .866ft^2)$

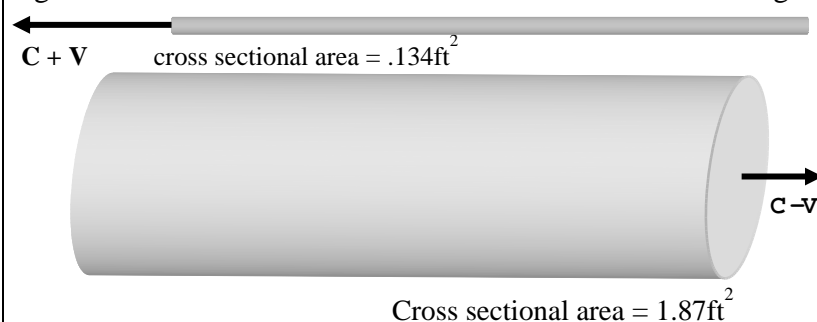
$.250ft^3/sec = .250ft^3/sec$

Flowing Volume = .250ft<sup>3</sup>/sec

Here, at this point in our discussion, we could use formula (7) and very simply end the calculations. However, this would not be very instructive because the problems that (7) solves would not be that apparent. Therefore, we will show how the various parts of formula (7) solve this crucial problem:

To show how formula (7) works, note figure A-4 below:

Figure A-4: Cross sectional views of the two vortices moving at .866c :



Note how the cross sectional area of the flow traveling at the apparent velocity of 1.866c is now about 14 times less than the cross sectional area of the flow traveling at the apparent velocity of .134c.

Hence, the Flowing volumes of the two flows into and out of each particle are again equal:

$$.250\text{ft}^3/\text{sec} = .250\text{ft}^3/\text{sec}$$

However, the above identity is incorrect, because when  $V = .866c$ , one second of measured "time" no longer equals one second of measured "time" when motionless. To compensate for this discrepancy, the measurement of time needs to be adjusted for the time dilation effects. [From formula (2), the formula developed by Lorentz, and step 10.]

$$\frac{1}{\sqrt{1 - v^2/c^2}} = \text{TIME DILATION EFFECTS}$$

**(Note: although this formula will be discussed later, it must be used now in our calculations in order for us to proceed.)**

Therefore: the flow of .250 cubic feet per second in our time frame must be changed to account for the time dilation effects which occur in this faster moving time frame:

$$(.250\text{ft}^3/\text{sec}) \cdot \frac{1}{\sqrt{1 - (.866)^2}} = .500\text{ft}^3/\text{sec}$$

However, this flow still does not equal the value of the electrostatic charge given in the Initial Conditions at the start of this problem:  $1/\text{ft}^3\text{sec}$ . [Note, the value of  $1/\text{ft}^3\text{sec}$  is extremely important because it is equal to the value of the electrostatic charge of both the proton and the electron.]

Because the flowing volume of the vortices moving at velocity  $V$  do not equal the flowing volume of the vortices when the atom was at rest in reference to the *Backdrop of space*, more flowing space from the vortices needs to flow into the proton and the electron. This discrepancy causes the flow to shorten its length to increase the volume of the flow.

Hence, the electron must move closer to the proton to again make the volume of the flow return to its constant value of "one cubic foot per second".

And it just so happens, ***that the new shorter length necessary to again return the flow to "one cubic foot per second", is EXACTLY THE SAME LENGTH THE ATOM SHRINKS AS PREDICTED BY LORENTZ AND FITZGERALDS (EVEN THOUGH THEY DIDN'T KNOW WHY)!!!***

From Formula(1), Since:  $\text{ft}) \sqrt{1 - v^2/c^2} = (\text{ft})[1 - (.866)^2]^{1/2} = .500\text{ft}$

Then:  $\frac{.500\text{ft}^3/\text{sec}}{.500\text{ft}} = 1\text{FT}^3/\text{SEC} !!!$

$$\frac{.500\text{ft}}{1\text{ft}}$$

### #3 The flowing volume perpendicular to the direction of travel:

The atom does not shrink in the direction perpendicular to the velocity of travel, because it does not have to.

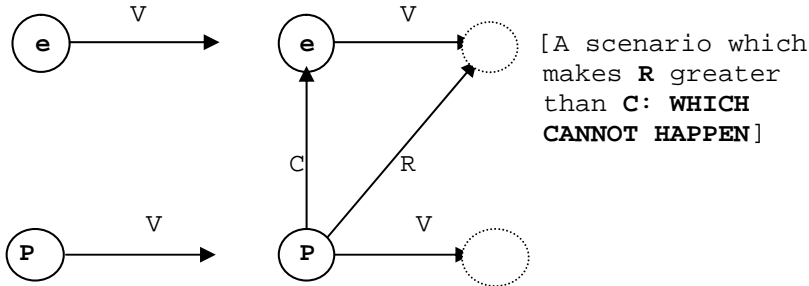
**Note, the initial conditions are still the same as in the above problem:**

Unlike the direction parallel to the velocity of travel, in the direction perpendicular to the velocity of travel, both flowing volumes have IDENTICAL APPARENT VELOCITIES, making their cross sectional areas equal. Consequently, one flow does not have to subtract from itself to add to the other.

Furthermore, unlike its non-moving condition, the two vortices cannot flow directly towards each particle. When flowing space is discharged from a moving particle towards another particle

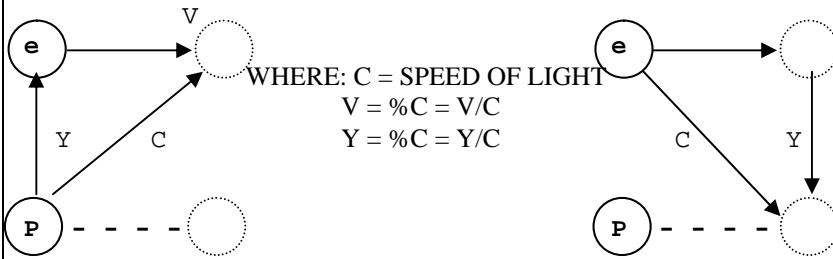
perpendicular to it, space cannot flow directly towards it. If it did, its resultant vector "R", would be moving faster than the speed of light "C":

FIGURE A-5



Therefore, when space traveling at the speed of light flows out of one particle towards the other, which is above or below it, it now has to travel at the apparent velocity of the "y" vector:

FIGURE A-6



In this situation, with both particles directly perpendicular to each other, "y" equals the APPARENT VELOCITY of the space both flowing from the electron to the proton and from the proton to the electron. Because the angles between the "V" vectors and the "C" vectors are the same, both "y" vectors are also equal to each other via similar triangles.

To calculate the value of "y" when  $v = .866c$ , the Pythagorean theorem is used:

$$C^2 = V^2 + y^2$$

$$y^2 = C^2 - V^2$$

$$y^2 = 1 - (.866)^2$$

$$y = .5ft/sec$$

Hence: APPARENT VELOCITY into the electron = .5ft/sec

APPARENT VELOCITY out of the electron = .5ft/sec

To calculate the value of the FLOWING VOLUME Formula (4) is used:

Formula (4):  $V_i = V_o$   
 (Vel. In)(Area) = (Vel. Out)(Area)

$$(.5ft/sec)(1ft^2 + Xft^2) = (.5ft/sec)(1ft^2 - Xft^2)$$

$$(X)(1ft^3/sec) = 0$$

$$X = 0$$

$$(.5ft/sec)(1ft^2) = (.5ft/sec)(1ft^2)$$

$$.5\text{ft}^3/\text{sec} = .5\text{ft}^3/\text{sec}$$

To calculate the LENGTH of the flow, Formula (7) is used:

$$F_L = \frac{F_V}{\left[ \frac{L}{L_U} \right]} \cdot \frac{1}{\sqrt{1 - V^2/C^2}} = k \quad (7)$$

Formula #1: 
$$\frac{F_V}{\left[ \frac{L}{L_U} \right]} \cdot \frac{1}{\sqrt{1 - V^2/C^2}} = 1\text{ft}^3/\text{sec}$$

Given: 
$$\frac{(.5\text{ft}^3/\text{sec})}{\left[ \frac{L}{1\text{ft}} \right]} \cdot \frac{1}{\sqrt{1 - (.866)^2}} = 1\text{ft}^3/\text{sec}$$

Since: 
$$\frac{1\text{ft}^3/\text{sec}}{\left[ \frac{L}{1\text{ft}} \right]} = 1\text{ft}^3/\text{sec}$$

Then:  $L = \text{Length} = 1\text{ft} !!!$

***Consequently, in the direction perpendicular to the velocity of travel, THE RADIUS OF THE ATOM DOES NOT SHRINK! HENCE, THE DIAMETER DOES NOT SHRINK EITHER: JUST AS PREDICTED BY LORENTZ AND FITZGERALDS (EVEN THOUGH THEY DIDN'T KNOW WHY)!!!***

#### #4 The radius of the atom from 0 to 90 degrees:

The key to discovering the shape of the atom from 0 to 90 degrees is found in the changing lengths of its radius. And the key to discovering the lengths of its changing radius is found in the changing values of the APPARENT VELOCITIES of the two vortices as they rotate with the electron about the proton.

Because it is impossible (at this writing) to tell what path the electron is following about the proton in a hydrogen atom, only the electron's positions at different places on the shell it forms around the proton can be described. (Note, as was said before, for the purposes of our discussion, how the electron got to a certain position on the shell it forms about the proton is not as important as the radius of the atom at that position.)

Therefore, the following calculations are only for various positions of the electron on its shell, and for the appropriate radii of the hydrogen atom at these locations.

To calculate the APPARENT VELOCITIES of the vortices in the region greater than 0 degrees yet less than 90 degrees, the viewpoints of the omnipresent observer, and the traveler within the spaceship must be re-examined.

By now it should be apparent that the traveler's viewpoint within the spaceship is also our viewpoint, our earthly viewpoint as seen from the "spaceship earth".

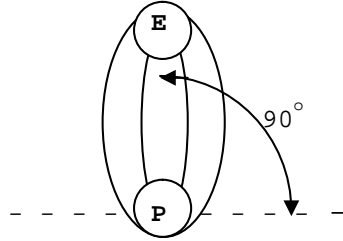
From this viewpoint we can only see what we can see. And the sight we see is one of "normality". Every day, everything appears normal to us.

This viewpoint is also limited to a certain degree. We cannot look into the atom and measure the velocities of the vortices. Indeed, we cannot even see these vortices, we can only perceive them with our imaginations.

However, if we could see our world from the viewpoint of the omnipresent observer, we would see a totally different vision of reality. Nothing would seem "normal" to us, especially the flows of the vortices.

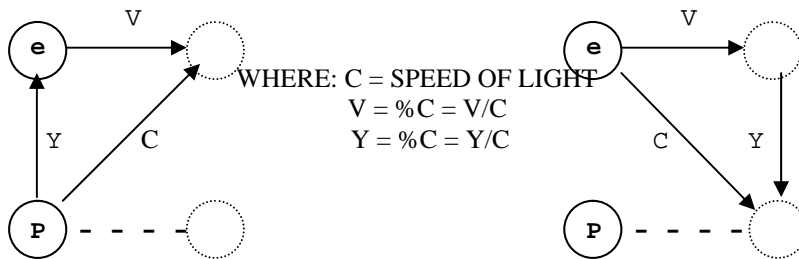
For example, when the electron and proton align to form a 90° with the direction of travel, from the travelers perspective it appears that both vortices are travelling at the speed of light.

FIGURE A-7



However, as seen from the omnipresent point of view, for a 90° angle the vortices are actually flowing at the slower apparent velocity of the "y" vector:

FIGURE A-8



To understand why this phenomenon is taking place, it is important to reiterate that the traveler is viewing an illusion, while the omnipresent observer is viewing reality.

The traveler views his surroundings as if everything is sitting dead still, while the omnipresent observer sees the world (or spaceship) in motion. Hence the omnipresent observer sees what is really happening. He sees the atom moving through space at velocity (V) causing space to flow at the slower apparent velocity of the "y" vector.

The reason why the omnipresent observer sees the space flowing at this slower apparent velocity is again due to the fact that while moving at velocity (V), the vortex flowing FROM the proton TO the electron cannot flow directly towards it at the speed of light. As previously mentioned, if it did, its resultant vector would exceed the speed of light. Hence, to account for this fact the following formula is used:

$$[(\text{Cos } A)(Z_1) + V]^2 + [(\text{Sin } A)(Z_1)]^2 = C^2 \quad (10)$$

This formula is merely an extension of the Pythagorean Theorem with "[(\text{Cos } A)(Z\_1) + V]^2" representing the horizontal component, while the value of "[(\text{Sin } A)(Z\_1)]^2" represents the vertical component. The value of "Z" is the apparent velocity, while "C" is the speed of light.

Since there are two vortices, formula (10) is the formula for what will be called the UP VORTEX. The UP VORTEX flows against the direction of travel. The UP VORTEX flows through higher dimensional space from the proton to the electron in Quadrants #1 and #4 of the Cartesian Co-ordinate system when the atom is moving from left to right across the page.

The vector which flows through three-dimensional space from the electron to the proton in Quadrants #1 and #4 is designated the BACK VORTEX.

The value of the BACK VORTEX is found by the following formula:

$$[(\text{Cos } A)(Z_2) - V]^2 + [(\text{Sin } A)(Z_2)]^2 = C^2 \quad (11)$$

As before, this formula is also merely an extension of the Pythagorean Theorem. The only difference between this formula and formula (10) is the value of "V". Here, velocity "V" has a negative value. This condition arises because the vortex is flowing backwards towards the particle which is moving forward towards it. Making it appear as if this vortex is moving faster. However, it, like the UP VORTEX is always flowing at "C", the speed of light. In reference to the "backdrop of space" this speed never changes, no matter how fast the atom is moving.

The study of these two formulas shows that they also contain the solutions to the two problems we have already solved: the direction PARALLEL to the velocity of travel, and the direction PERPENDICULAR to the velocity of travel:

[When angle A equals 0 degrees, the sine equals 0 while the cosine equals 1; making "Z<sub>1</sub>", the apparent velocity, of the UP VORTEX equal to C - V, and "Z<sub>2</sub>", the apparent velocity of the BACK VORTEX equal to C + V: allowing us to find the length of the atom in the direction PARALLEL to the velocity of travel.

Conversely, when angle A equals 90 degrees, the Sine equals 1, while the Cosine now equals 0. This makes "Z", the apparent velocity of both the UP and BACK VORTICES equal to the square root of C squared minus V squared: allowing us to find the length of the atom in the direction PERPENDICULAR to the direction of travel.

Note too, that when the atom is not moving, "V" equals 0, making the value of "Z" equal to "C", the speed of light.

To solve for the value of "Z" in either formula, the following formula is used:

$$Z_{1\&2} = [(-V)(\cos A)] \pm \sqrt{(V^2)(\cos A)^2 - V^2 + C^2} \quad (12)$$

Note, the addition of the two terms in this equation gives us the value of the apparent velocity for the UP VORTEX, while their subtraction equals the value of the BACK VORTEX. (The difference in their signs indicates they are traveling in opposite directions.)

Also, as was previously mentioned, formulas (10) and (11) are for the positions of the electron and proton when they are in Quadrants #1 and #4 of the Cartesian Co-ordinate system, while quadrants #2 and #3 use the same formulas with their positions reversed: formula (10) is for the BACK vortex, while formula (11) is for the UP vortex.

Putting all of this together, once we have found the values of the APPARENT VELOCITY UP and the APPARENT VELOCITY BACK, we can then substitute these values into formula (4) and find the value of the FLOWING VOLUME. The value of the flowing volume is then substituted back into the MAIN FORMULA to find the value of the LENGTH OF THE FLOW: which equals the radius of the hydrogen atom at this particular location of the electron on the shell.

FOR EXAMPLE: When the atom is moving at a velocity of .866C, to find the radius of the atom where it makes a 45 degree angle to the direction of the velocity of travel, the following procedure is used:

Step #1 Find the values of the apparent velocities of the Up and Back vortices:

Formula (12)

$$Z_{1\&2} = [(-V)(\cos A)] \pm \sqrt{(V^2)(\cos A)^2 - V^2 + C^2}$$

$$Z_{1\&2} = [(-.866)(.707)] \pm \sqrt{(.866)^2(.707)^2 - (.866)^2 + (1)^2}$$

$$Z_{1\&2} = [-.612] \pm [.790]$$

$$\text{UP} = [-.612] + [.790] = .178 \text{ ft/sec}$$

$$\text{Back} = [-.612] - [.790] = 1.402 \text{ ft/sec}$$

[Note, the negative sign only designates direction and is not necessary for our solution.]

Step #2 Find the value of the flowing volume:

$$\text{Formula (4)} \quad V_i = V_o \\ (\text{Vel. In})(\text{Area}) = (\text{Vel. Out})(\text{Area})$$

Since: Velocity Up = Velocity In

And: Velocity Back = Velocity Out

Then: (Velocity Up)(Area) = (Velocity Back)(Area)

$$\text{So: } (.178\text{ft/sec})(1\text{ft}^2 + X\text{ft}^2) = (1.402\text{ft/sec})(1\text{ft}^2 - X\text{ft}^2)$$

$$X = .775$$

$$\text{Hence: Flowing Volume} = (.178\text{ft/sec})(1\text{ft}^2 + .775\text{ft}^2) = 0.316\text{ft}^3/\text{sec}$$

Step #3 To find the length of the radius at 45 degrees to the direction of the velocity of travel:

Formula (7):

$$F_L = \frac{F_v}{[L/L_U]} \cdot \sqrt{\frac{1}{1 - V^2/C^2}} = k$$

$$F_L = \frac{(.316\text{ft}^3/\text{sec})}{\left[\frac{L}{(1\text{ft})}\right]} \cdot \sqrt{\frac{1}{1 - (.866)^2}} = 1\text{ft}^3/\text{sec}$$

$$L = \text{Length} = .63\text{ft}$$

Hence, when the positions of the electron and the proton are such that a line drawn between them forms an angle of 45 degrees to the direction of the velocity of travel, the radius shrinks to a value of .63ft.

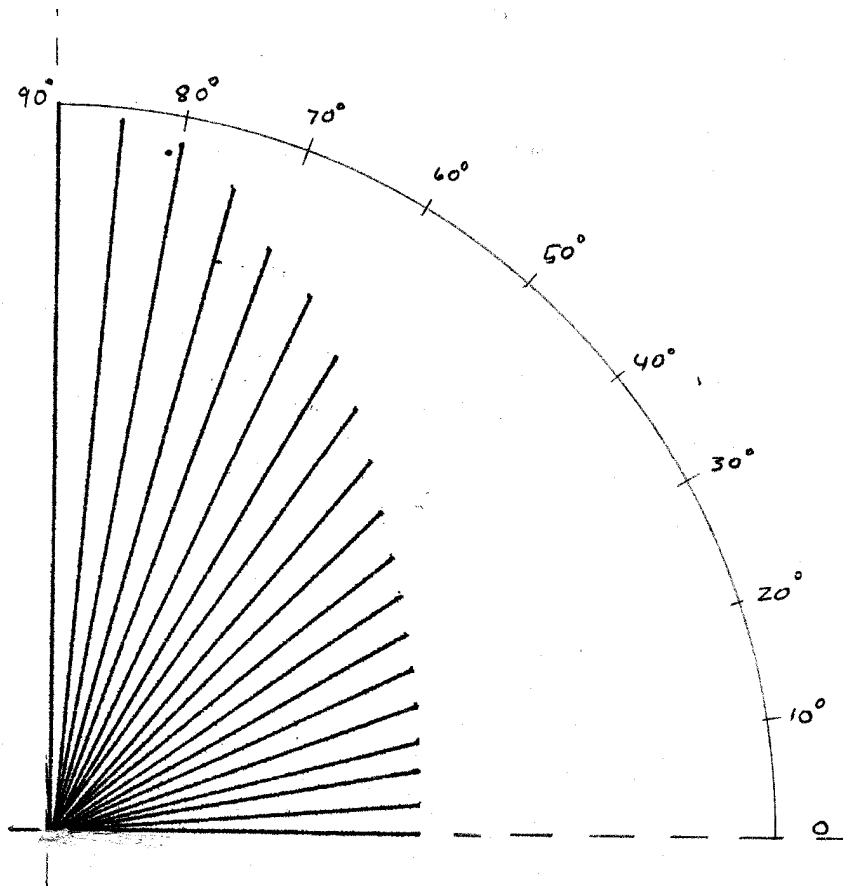
Plotting a number of angles with their corresponding radii yields the following table:

TABLE #1	
Angle	Radius
0	.500
5	.502
10	.506
15	.513
20	.524
25	.538
30	.55
35	.58
40	.60
45	.63
50	.67
55	.71
60	.76
65	.81
70	.86
75	.91
80	.96
85	.99
90	1.00

[Note: these values are for all four regions of the Cartesian co-ordinate system. for the (+X, +Y)Region; the (+X, -Y)Region; the (-X, +Y)Region; and the (-X, -Y) Region

When plotted, they create a cross section of the hydrogen atom, and when this cross section is rotated about the X axis, its complete three dimensional shape is created.]

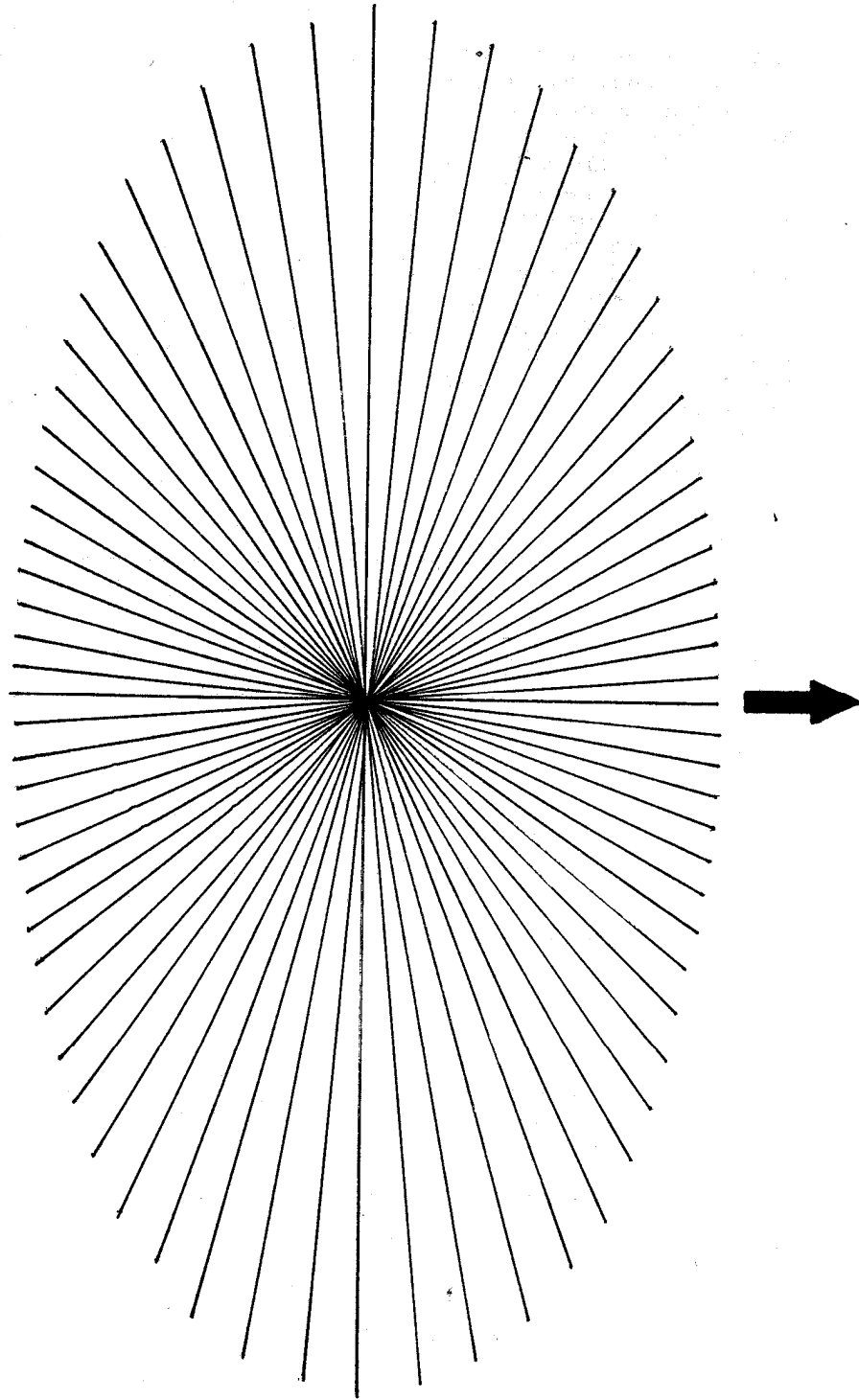
WHEN THE VALUES FOR THE X, Y, REGION ARE PLOTTED, THE FOLLOWING SHAPE IS CREATED:





WHEN THE VALUES OF ALL FOUR REGIONS ARE PLOTTED, A SPECTACULAR ELLIPTICAL  
SHAPE COMES INTO VIEW:

FIGURE 24.1:1



When the hydrogen atom is traveling at  $.866c$ , this is its elliptical side view; but from directly in front, it would look like a perfectly circle.

## PART 111 THE PHENOMENON OF TIME

The speed of light is the first clue to deducing the true nature of time.

The true nature of time is discovered by first realizing that the speed of light is not a variable. It is one of the great constants of nature. In free space, all photons of light move at the same speed; this extremely important piece of knowledge allows us to determine exactly how the phenomenon of time is created.

Although there appears to be a number of ways to create photons, one way is within the vortex. In the vortex theory, it was proposed that a photon of light is a condensed packet of 3d space thrown from the flowing vortex joining the particles of an atom together. Because the speed of light is not a variable, all photons appear to move at the same rate everywhere; an inference that allows us to hypothesize that the speed of all of the vortices in all of the atoms in the universe are also flowing at the same rate. A stunning realization that allows us to arrive at the equally astounding conclusion – **that the phenomenon of time is created by the speed of the vortex!**

This simply remarkable conclusion, results from the fact that all motions in the universe begin with, and are functions of, the speed of the vortex as mentioned in this book. For example, because the electron is nothing more than a hole in space through which the vortex is flowing, the velocity of the space flowing through it governs the speed of the electron about the proton. The maxim speed the atom can move is also function of the space flowing in the vortex. The velocity of the atom cannot exceed the speed of the vortex. If it did, the vortex flowing in the direction of travel could never catch up to the particle it was trying to reach. Hence, the speed of light is the terminal velocity for the matter of the universe.

Then there are the “after effects” of the speed of the vortex.

The speed of the reconfiguration of space around particles is also limited. Since the space surrounding a particle is pulled into or pushed out of it at the speed of the vortex, as the particle moves, it reconfigures itself around the particle at the speed of the vortex.

The forces of nature also reconfigure themselves at the speed of the vortex. Each force is a manifestation of the *dense and flowing space* created by the holes we once thought were particles. Consequently, each force is also unable to reconfigure itself faster than the speed of the vortex.

To sum it all up, because every motion of matter, space, energy, and the forces of nature are a function of the velocity of the vortices, the motion of everything in the universe is a function of the vortices. Hence, every synchronistic motion that is responsible for creating the phenomenon of time can be traced to the velocity of the vortices.

The phenomenon of time is the result of all the harmonic and sequential atomic, chemical, biological, and astronomical motions creating an orderly sequence of constantly repeating events. These constantly repeating events create a sense of order and harmony in the universe. This order and harmony is responsible for the creation of the phenomenon of time.

However, although the phenomenon of time is real, time isn't. The order and harmony of the constantly repeating events in the universe are not being created by "time" they are created by the velocity of the space flowing in the vortices.

It should be mentioned that the velocity of the space flowing within the vortices is theorized to be a function of the elasticity of space itself!

Because I was once told by a professor of physics that space would have to be very dense to allow light to travel at the incredible speed that it does, and therefore could not bend or flow - this erroneous deduction must be dispelled. It is also necessary to dispel the equally wrong inference that the elasticity of space might itself be a function of time, and that time might still exist.

The way I like to dispel these wrong ideas is to mention an incredible fact that surfaced during the course of these investigations: I like to call it – **HOW FAST IS FAST!**

This incredible discovery stems from the fact that the speed of light might not be very fast at all! Light might not be moving at 186,000 miles a second! In fact, how fast it is really moving is

unknown and can never be measured!

This amazing discovery came from the deduction that every motion in the universe used as a reference to compare other motions to is a function of the speed of the vortices! All other motions are created by the speed of the vortices. The vortices might very well be flowing at the speed of one foot per second, or a billion miles per second and we would never know it!

All we can say is this, "That according to the "backdrop of space", the vortices are moving." We can use the backdrop of space to compare motions to, and we can compare the speed of one motion to another. We can state that one motion is faster than another, - but we cannot tell exactly how fast those motions are! So "how fast is fast", nobody knows!

## PART IV TIME DILATION

Because *dense and flowing space* moves at the same rate everywhere, all similar motions take place at a fixed rate everywhere. Accordingly, if a situation develops in some area of the universe where *dense and flowing space* can no longer move at its maximum rate, motions in this area will slow down, creating greater distances between the repetition of events occurring here, and the repetition of similar events occurring elsewhere. Such a situation would make it appear as if "time" has somehow slowed down.

Which is precisely what happens at near light velocities.

At near light velocities, the SLOWER APPARENT VELOCITY of *dense and flowing space* causes all motions to slow down, creating the phenomenon of "time dilation".

FOR EXAMPLE:

When the atom is moving at  $V = .866c$ , if the length of the radius of the atom, at any point on its shell, is first divided by the apparent velocity of the space flowing "up" and then divided by the apparent velocity of the space flowing "back", a wonderful discovery is made. We find that the sum of these two different times now equals a measured value for the round trip time which is *twice* that for when the atom was not moving relative to the backdrop of space.

In other words, when the hydrogen atom is moving at  $.866c$ , it now takes twice as long for flowing space to make the round trip between the electron and the proton than it did when the atom was not moving. This phenomenon is demonstrated in the following table:

TABLE #2						
[For $V = .866C$ ]						
Angle "A"	Length of radius	Apparent Velocity UP	Apparent Velocity BACK	Time up	Time back	Total time
90 Deg	1.0 ft	.5 ft/sec	.5 ft/sec	2 sec	2 sec	4 sec
80	.958	.3718	.6724	2.575	1.424	4.00
70	.860	.2849	.8773	3.019	.980	4.00
60	.756	.2284	1.0944	3.310	.690	4.00
50	.668	.1916	1.305	2.486	.512	4.00
40	.602	.1673	1.494	3.597	.403	4.00
30	.555	.1514	1.6514	3.664	.336	4.00
20	.523	.1410	1.769	3.709	.296	4.00
10	.506	.1358	1.8414	3.725	.275	4.00
0	.500	.1340	1.8660	3.730	.270	4.00

Note: In the TOTAL TIME column, the addition of the TIME UP and the TIME BACK columns were rounded off to 4.0 seconds.

Because only three significant figures are used in the above table, the TIME UP and the TIME BACK do not appear to add up to the value of 4.0 seconds. This discrepancy occurs because only values of many, many significant figures add up to 4.0 seconds. Therefore, this liberty was taken to conserve space. Note too, when the atom is NOT moving, the value of the TIME UP and the TIME BACK are equal to "1" second each way: which total "2" seconds for a round trip.

For a velocity of .866C, notice how the total round trip time of 4.0 seconds is always twice as long as the previous round trip time of 2.0 seconds when the atom was not moving.

When the round trip times for many different velocities are calculated, the difference between their round trip time and the "at rest" round trip time is always equal to:

CONTEMPORARY VIEW:

$$dt' = \frac{dt}{\sqrt{1 - v^2/c^2}} = \text{TIME DILATION EFFECTS}$$

Where dt' equals the difference in a measured second of time in the moving frame of reference which is travelling at velocity "V", and the measured second of time (dt) in the non-moving frame of reference.

When moving at .866C, ANY MOTION made by matter now takes twice as long as it did when it was at rest in reference to the backdrop of space.

VORTEX THEORY:

$$d(\text{space})' = \frac{d(\text{space})}{\sqrt{1 - v^2/c^2}} = \text{TIME DILATION EFFECTS}$$

Where d(space)' equals the apparent elasticity of space in a moving frame of reference which is traveling at velocity "V", and d(space) equals the elasticity of space in the non-moving frame of reference.

## PART V THE EXPLANATION OF THE MICHELSON MORLEY EXPERIMENT

The explanation of the Michelson Morley experiment is now apparent. When moving at any velocity, because of the way the atoms are constructed out of *dense and flowing space*, the lengths of physical objects ACTUALLY SHRINK in the direction parallel to the velocity of motion, and the SLOWER APPARENT VELOCITY of space causes all motions to slow proportionally. Hence, the measurement of the speed of light is the same for any and all velocities an individual happens to be traveling at.

In this paper, the proof of the length shrinkage and time dilation effects used one set of vortices in one hydrogen atom. Even though this was a simplification, because all protons and all electrons in all atoms will be connected in a similar way, all of the other atoms in all of the other elements will behave like those described here. Causing their lengths parallel to the direction of velocity to shrink, while their lengths perpendicular to the velocity of travel maintain the same dimensions.

Furthermore, since every set of vortices in all of the other atoms of everything in the Earth slow down according to the slower apparent velocity of *dense and flowing space*, the motions of

everything slows accordingly: creating time dilation effects.

Hence we now have a third explanation for the Michelson Morley experiment. Because the lengths of everything in the Earth including Michelson and Morley's apparatus shrink parallel to the direction of the Earth's velocity, and since the lengths of everything in the Earth perpendicular to the Earth's velocity do not shrink, the travel times between the two sets of mirrors is always the same.

Also, since the slower apparent velocity makes all of the motions of everything in the Earth slow proportionally, no change was seen during the different seasons of the year as the Earth speeds up or slows down slightly during its orbit of the Sun.

When Michelson and Morley conducted their famous experiment, even though they made the lengths between their mirrors equal, and arranged them at 90 degree angles to each other, neither of these criterion are important.

The Michelson Morley experiment measures the relative time difference between the two sets of mirrors. Hence, the relative time difference for any two sets of mirrors set at different lengths from each other, or at angles other than 90 degrees will always show the same relative time difference no matter how they are rotated to each other, to the direction of travel, or what velocity they move at.

This effect occurs because the radii of atoms at different angles to the velocity of travel all have different lengths and different apparent velocities. This creates round trip travel times equal to the round trip travel times of all other radii at all other angles to the velocity of travel (as demonstrated in table #1).

Consequently, if the distance between one set of mirrors is one foot, and the distance between the other set is three feet, it will always take three times as long for light to travel between one set verses the other. Hence their relative travel times will always show this same difference no matter how they are positioned to the velocity of travel, or what the angle is between them.

### **End of proof**

### **SOLVING FOR "Z", THE APPARENT VELOCITY, IN FORMULAS #3 AND #4:**

Note: Although I am the originator of equations #3 and #4, the solution for the value of "Z" was derived by a young graduate student in Physics working on his PHD at *FLORIDA ATLANTIC UNIVERSITY* in Boca Raton Florida. To solve for "Z", the Quadratic Formula is used; Knowing this clue, the proof becomes so simple, a high school student can do it.

## **CH 25 THE END OF THE THEORY OF RELATIVITY**

The era of the Theory of Relativity comes to a close when it is realized that Albert Einstein's vision of the universe is completely wrong. The Theory of Relativity is based upon the effects of the universe and not the causes.

There are two completely different visions of the universe: the vision of effect, and the vision of cause. The first vision is seen with our eyes, while the second vision is perceived with our minds. And even though each appears real, the first is nothing but an illusion created by the second.

The idea that space is made of nothing, matter is made of something, and time exists as a fourth dimension is totally wrong! Nothing could be further from the truth.

Even though Mr. Einstein's fourth dimension of "space-time" was a brilliant idea, his use of it to explain the length shrinkage and time dilation effects associated with near light velocities was dead wrong. Einstein was close to the truth, but his use of the fourth dimension was more of a metaphysical explanation than a precise mechanical explanation.

Although there is a fourth dimension, it doesn't possess any "time" characteristics. It doesn't somehow create length shrinkage and time dilation effects. Instead, when matter moves, it is the shrinkage of the vortices themselves that are flowing back and forth between three dimensional space and higher dimensional space that are creating the length shrinkage effects. And as can be seen in THE PROOF, it is the slower apparent velocity of *dense and flowing space* that is creating the "time dilation" effects.

Einstein once said, "Imagination is greater than education". A profound insight that is absolutely true! For when everyone is trained alike, everyone thinks alike, everyone reasons alike, and everyone comes to the same conclusions.

This continued way of thought does not find errors, but reaffirms errors from one generation to the next. The only way to break this misleading cycle is to throw away the authoritarian educational training received from others and to use one's own imagination to think in ways no one has ever thought in before.

This was the very way of thinking that launched Einstein upon a voyage of discovery, but never allowed him to reach the "New World". Mr. Einstein's problem was that he tried to incorporate the concept of time into all of his ideas, never realizing that this was the excess baggage of past generations that needed to be discarded before ever trying to make the trip.

Although he was right many times, he was also wrong.

Einstein's use of his imagination allowed him to correctly deduce that the speed of light would be measured the same for all observers everywhere no matter how fast they were traveling. A brilliant deduction! However, because Einstein believed space was made of nothing, he never deduced the principle of the "backdrop of space". Hence, from Einstein's point of view, the motions of everything in the universe were "relative" to the motions of everything else. A situation that appears to be absolutely true for the observations of the planets, stars, and galaxies we see from our perspective as human beings living here upon the Earth. Hence, the Lorentz transformation equations that allow us to calculate the "time differences" between two moving frames of reference are still valid. And even though the "twins paradox", the orbit of Mercury aberrations, and many other observations from the "relativistic" vision of the universe are still real effects, the causes of these effects have nothing to do with the concept of time.

Just as Newton's laws are still applicable even though the Theory of Relativity amended them, the Theory of Relativity is still applicable too, even though the Vortex Theory now amends it.

However, in the "microscopic" world of the atom, things are very different. The "microscopic" universe possesses a completely different perspective than that seen from the "macroscopic" point of view of the universe.

The view of the universe from inside a proton or an electron is completely different from the relativistic view. Because of these two differences in perspective, there will always be two truths to our viewpoint of the universe. There is the truth of cause and the truth of effect.

The misunderstanding of these two truths has fooled many of the greatest thinkers who have ever lived. Aristotle was fooled. Aristotle believed everything above the orbit of the Moon was unchanging. An observation seen from his perspective [and from ours], that appears to be absolutely correct! When we look up at the positions of the stars in the sky, they do indeed appear to be forever eternal and unchanging. A mistaken belief that makes his assumption appears to be absolutely true. Indeed, it is a true effect - we actually see it. In fact, from the time we are born until the time we die, nothing appears to have changed in the night sky. We can truthfully witness and testify to this effect in court.

Even so, nothing could be further from the truth. Everything in the sky is constantly changing its position. What we are witnessing and testifying to are only the *effects* we are seeing from our point of view here upon the earth. Today, we all know that the cause of this effect results from the fact that these stars are so incredibly far away that their actual motions are indiscernible.

Another example of these two contrary truths is seen in the rotation of the heavens. From the viewpoint of every generation up to and including Copernicus, it appeared as if everything was

revolving around the Earth. Although the stars do not appear to move as individuals, "en-mass" they appeared to revolve as one group - along with the Sun, Moon, and planets around the Earth: which is a true observation. However, as before, this is only the effect we are seeing. As we now know, the cause of the effect is being created by the rotation of the Earth itself.

Cause and effect - it crops up again and again in mans observations of the universe. We see an effect and try to assign a cause to it, but many times the causes we assign are completely wrong. But this technicality doesn't seem to bother most people. People need answers, and if one fulfills this need, whether it is right or wrong, the uncertainty is eliminated and men are satisfied.

When their children ask them the same questions they asked their parents, they are happy to be able to give them an answer. Soon the answer becomes part of the collective heritage of the ideas passed on from generation to generation. It becomes a belief and becomes a part of our mythology. The more people who believe it, the more believable it becomes!

In knowing how errors are made and propagated from generation to generation, we now understand Mr. Einstein's error. Like everyone else, he was taught to believe in the erroneous concept of time. Since he believed in time, he believed that the cause of the time dilation effects that occur at near light velocities was "time". However, after the discovery of the Vortex Theory, we can now see that there is a difference between the "effect" of time and the "cause" of time.

Although the "effect" of time - [the phenomenon of time] - appears to be real, it is not being created by "time". Instead, the motions of everything within the physical universe are creating it. However, it must be realized that these motions are themselves a function of the ELASTICITY OF SPACE. A characteristic of space that causes it to move at the same rate everywhere throughout the universe!

This similar rate creates a "synchronous repetition" for harmonic motions. Making all similar motions of matter occur at the same rate everywhere. Therefore, anything, which might change the elasticity of space, will also change the rate at which motions occur, creating the effect of "time dilation". Hence, the intense "gravitational fields" created by the massive regions of less dense space which exists around stars, changes the elasticity of space - making it move slower - creating time dilation effects. Answering the last of the enigmas of Relativity by allowing us to finally understand why "gravity" affects time.

Consequently, in lieu of the above knowledge, the Theory of Relativity is now but another chapter in the history of mankind. An era gone by! An era noted for its nuclear bombs and atomic powered submarines. Another era attributed to the worst and the best which mankind has to offer. An arrogant era where physicists told the people of the world that Einstein's Theory of Relativity was absolutely right, and anybody who disagreed was either uneducated or a fool! Well, at least they didn't burn people at the stake like their predecessors did!

What a time!

Although it is sad to see the end of an era, it is exciting to contemplate the beginning of a new one. An era that promises to be mankind's greatest!