

# Combined Theory for Everything

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**Abstract**— The paper describes a new theory for unifying Chemistry and Physics together. The paper describes how Atoms should be studied as Solar and planetary System. The paper describes how the Atoms, Molecules and its Structures mimic Stars, Planets, Solar System and Universe. And hence gives rise to theory that they infact are planet and stars. Which further have atoms which further are planets and stars to infinity. Another major postulates the paper presents is that Atom should be studied from Quantum Physics Time Dilation side as well. Using Time dilation the paper describes that how when looking at Atom we should not consider Human clock. Because clock at Atom will be ticking too much faster then clock at Human level. The paper describes how 1 second for human might mean many thousand years at sub-Atomic level.

**Index Terms**— Universe, Atom, Electron, Combined theory, Everything, Time Dilation, Chemistry, Physics.

## 1 INTRODUCTION

SCIENCE is based on facts and theories. Science stands on the fact that everything has a reason. Anything that is repeatable becomes rules and laws. And whatever cannot be determined due to limitations that can be physical or non-physical is tried to be explained by Theories. Theories are created from time to time that best describes the reason for phenomenon which caters to satisfaction of logic of peer scientific community. However there is no guarantee that it will be correct. There's a quote from Edwin Hubble "Equipped with his five senses, man explores the universe around him and calls the adventure Science". Theories are superseded from time to time as soon as any new discovery points anomalies in the previous Model.

The Atomic and Molecular Model in Chemistry and Stars and Planets of Universe in Physics are all mostly based on theories. No one has ever actually seen picture or events personally but the Theories are created based on experiments and data observation. And whichever theory best satisfies and proves Logical becomes primary theory. Before Copernicus/Galileo Earth was considered Flat, because it best described the logic of people at that time according to their observation because they didn't had well built telescopes. And now theory has advanced to Quantum Physics which best describes motions and time in Space. So it's likely that presents theories can well be overridden later on with more scientific discoveries and observations.

Keeping in line with the tradition of Theories in Science. This paper is an attempt by a wandering mind Author of a new point of view to see the things differently. And yes it is called a new Theory. This theory is an attempt to combine both Chemistry and Physics to be working in unison. The Author attempts to apply laws of Classical and Quantum Physics to Chemistry. And presents a new way to look at Model of Universe and Model of Atom.

The Author believes in Rutherford and Bohr, and their Planetary-Model of Atom. Author proposes that Sun or any Star is no different than nucleus of an Atom. And planets of any Star are no different than electrons of an Atom.

The rest of the paper will describe why Author believes so

and how it satisfies all the logic and phenomenon to be considered as single complete theory that justify both Chemistry and Physics.

## 2 RUTHERFORD, BOHR AND LARMOR

In 1911 Rutherford had described Rutherford Atomic Model. He in his Atomic Model had described that atoms can be represented as a diffused cloud of negatively charged electrons that surrounds a dense, small and positively charged nucleus.[1] Given this experimental data, Rutherford described a planetary-model of Atom. He described that electrons orbits around the solar nucleus just like how Planets move around Sun or Star. However, said planetary-model atom had a technical difficulty. The Larmor formula based on the laws of classical mechanics predicted that the electron would then release electromagnetic radiation while orbiting the nucleus. And because the electron would continuously lose its energy, it would rapidly spiral inwards and will collapse into the nucleus on a timescale of around 16 picoseconds.[2] This atomic model was hence considered disastrous, because it predicted that all atoms are unstable.[3]

To overcome this difficulty, Niels Bohr proposed, in 1913, what is now called the Bohr model of the atom. He suggested that electrons could only have certain classical motions:

1. Electrons in atoms orbit the nucleus.
2. The electrons can only orbit stably, without radiating, in certain orbits (called by Bohr the "stationary orbits"[4]) at a certain discrete set of distances from the nucleus. These orbits are associated with definite energies and are also called energy shells or energy levels. In these orbits, the electron's acceleration does not result in radiation and energy loss as required by classical electromagnetics. The Bohr model of an atom was based upon Planck's quantum theory of radiation.
3. Electrons can only gain and lose energy by jumping from one allowed orbit to another, absorbing or emitting electromagnetic radiation with a frequency  $\nu$  determined by the energy difference of the levels according to the Planck relation.

The Author of this paper proposes that as Bohr has suggested Electrons orbit around Nucleus in defined orbits. So if

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we see electrons as particles with Mass just like planets around Sun. The planets never collapse to Sun because Planets are like Satellite, they are that far away from Sun Gravity that make them keeps on falling along curvature. And just to add here. Artificial satellites do loose their orbit unlike planets because their orbit do have some thin air that creates drag. But planets never experience this drag so they keep on orbiting. So Author wants the reader to make analogy here (suggested by both Rutherford and Bohr Model) that electrons and planets orbit around nucleus and Sun in similar fashion. And just as planets around Sun never collapse to center, so would be the case be with the electrons.

### 3 COMBINED THEORY FOR EVERYTHING

In this theory as described before we should stop thinking atoms structure only in terms of +ve and -ve charges. Instead we should be considering them as Star and Planetary System with respective mass. And apply theory that we apply in Universe to Atom. And vice-versa apply theories of Atom to Universe.

### 4 ELECTRO-MAGNETISM OF ATOM

However if we stop thinking about Atom and its constituents in term of charges then how do we explain electro-magnetism behavior by Sun and Planetary System. For this author believes that magnetism is actually caused by anything rotating. Take example of earth. Earth is not positively or negatively charged but still it produces magnetism due to its rotation. Anything in motion will develop angular momentum at its axis of rotation. Take example of Cycle, it does not flips to its sides because angular momentum supports it. Author proposes that Electro-Magnetism of Atoms should be studied from the point of view of angular momentum and Gravity too.

The angular Momentum produce repulsion and Gravity cause attraction. The Author proposes that may be these or other forces causes positive and negative charges of Atom and so may help theorize how electro-magnetism works.

### 5 ATOMS IN UNIVERSE, UNIVERSE IN ATOMS

The Universe is supposed to be 13.8 billion years old, with the observable universe being around 46.6 billion light years and diameter is thought to be a staggering 93 billion light years.

If we travelled at speed of light it would take us 546,700,309,596,867,570,000,000 years to travel across the observable universe and it may go even further, possibly infinitely. [7]

Now picture this in your mind- You are at the biggest beach you have ever been to, one of those beaches where the sand runs as far as the eye can see, then add to this picture every other beach in the world, and then further to that every desert and every other grain of sand on this planet. Our planet in the grand scheme of things represents less than 1 grain of that sand or at least it does according to a study from the University of Hawaii. This study should not be taken to literally as in reality we have no real way to know this for certain. But you can read more about it here [7] [8]

Now just to spin your wheels a little bit more, you will also

find more molecules in 10 drops of water than you will find stars in the universe or grains of sand on the earth, so things go even deeper. So while the universal world is gigantic, so is the microscopic world if you look at it in the right way. [7][8][9]

Author proposes that Scientists agree that Universe will be bigger than what is observable at present. Then why do we limit that there wont be smaller things then Nucleus, Neutron, Protons, Gluons and Quarks. Sub Atomic structure is not observable to humans due to Human limitations. If we see it at relativity point of view. May be electrons are relatively as big as planets to some subatomic structures. And hence these electrons might be having its own beaches and sand grains and Atoms.

With this observation in mind, the Author proposes in this theory that Atoms in itself are Solar Systems. And atomic systems are a Universe in itself.

Author proposes that electrons are in fact planets and Nucleus are in fact Stars. And these electrons/Planets and Stars/Nucleus will further have their own Atoms. And these Atoms have further electrons which are in fact planets, and Nucleus in fact Stars. And these electrons/Planets and Stars/Nucleus will further have their own Atoms. And it goes on and on till infinity. One in another and another in one, a never ending cycle. This might seem preposterous ridiculous proposition to Readers. But that's just the culminations of different observation's Science has recorded that Author has observed and collated through various research data. It's a new point of view and Author begs to you to read and ponder when Author will further present observed proofs and evidences for the postulates that he is presenting. He will give scientific data and Quantum theory equations to prove his point of view. The proofs may necessitate a good debate for whether Author is right/wrong.

### 6 ATOMS AND UNIVERSE RELATION

Here are the proofs that Author proposes

#### 6.1 Spatial Similarity

Let us Compare Solar System with any Atom.

Our Solar System is supposed to have 9 planets. But some people consider Pluto as non-planet and proposes that it's in fact an 8 planet solar System. So our Solar System can be considered any of Nitrogen, Oxygen or Fluorine atom. Let us take it more as Oxygen Atom.

Now let's compare the Sizes. Author was not able to get spatial data of Oxygen. So we will study the spatial data of Hydrogen instead. Here it is:

Dia of Hydrogen Nucleus =  $2.4 \times 10^{-15}$

Bohr Radius of hydrogen has a value of  $5.29 \times 10^{-11}$  m

So Bohr Dia of hydrogen has a value of  $10.58 \times 10^{-11}$  m

Dia of orbit of electron / Dia of Nucleus = 2268.4

Now let us determine spatial data of Solar System:

Distance between Mercury and Sun = 57,910,000 km

Diameter of Sun = 1,391,684 km

Dia of Orbit of Mercury / Dia of Sun = 83.2

Distance of Jupiter from Sun = 778,500,000 km

Dia of Orbit of Jupiter /Dia of Sun=1118.8

Distance of Neptune from Sun= 4,503,000,000 km

Dia of Orbit of Neptune /Dia of Sun=6471.3

So you can see ratio of Orbit of Planet to Sun's Dia vary from 83.2 for Mercury to 6471.3 for Jupiter. So this gives enough room to believe that this is somewhat comparable to ratio of Dia of orbit of electron/Dia of Nucleus of Hydrogen Atom which comes out to order of approx. 2268. So it falls in the range.

## 6.2 Molecular Similarity

Matter can exist in Solid, Liquid or Gaseous forms. Author don't want to be specific but believes that we can view Universe more as Gaseous State of Matter. And it may have molecules. The air composition of Earth is shown in Table 1.

TABLE 1

Gaseous composition of dry air		
Constituent	Chemical symbol	Mole percent
Nitrogen	N <sub>2</sub>	78.084
Oxygen	O <sub>2</sub>	20.947
Argon	Ar	0.934
Carbon dioxide	CO <sub>2</sub>	0.0370
Neon	Ne	0.001818
Helium	He	0.000524
Methane	CH <sub>4</sub>	0.00017
Krypton	Kr	0.000114
Hydrogen	H <sub>2</sub>	0.000053
Nitrous oxide	N <sub>2</sub> O	0.000031
Xenon	Xe	0.0000087
Ozone*	O <sub>3</sub>	trace to 0.0008
Carbon monoxide	CO	trace to 0.000025
Sulfur dioxide	SO <sub>2</sub>	trace to 0.00001
Nitrogen dioxide	NO <sub>2</sub>	trace to 0.000002
Ammonia	NH <sub>3</sub>	trace to 0.0000003

\*Low concentrations in troposphere; ozone maximum is found at 30- to 40-km above Earth's surface in the equatorial region.  
(After Warneck, 1988; Anderson, 1989; Wayne, 1991.)

And if we see our closest neighbor Alpha Centauri. It has 3 stars. Two are very close together. Which gives Author an image that they behave like O<sub>2</sub> or CO<sub>2</sub> molecule. Let us look at how.

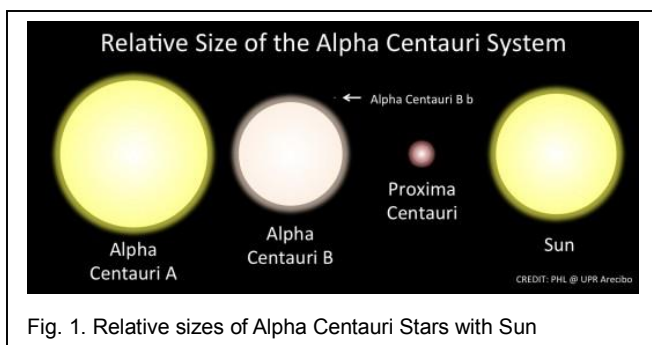


Fig. 1. Relative sizes of Alpha Centauri Stars with Sun

Two of Alpha Centauri stars are named Alpha Centauri A ( $\alpha$  Cen A), with 110% of the mass and Alpha Centauri B ( $\alpha$  Cen B), at 90.7% of the Sun's. So these two stars are almost equivalent to mass of Sun which we may think of as Oxygen Nucleus. You

can check their relative sizes in Figure 1.

A third star, known as Proxima Centauri, Proxima, or Alpha Centauri C ( $\alpha$  Cen C), is probably gravitationally associated with Alpha Centauri AB. But it's not totally confirmed. Proxima is at the slightly smaller distance of 1.29 parsecs or 4.24 light years from the Sun. But its mass is 0.123 times of Sun. [10]

And there are many other Solar Systems having 2 or more stars. Giving a picture like of Molecules.

Another Example: Recently Astronomers in Wales unveil rare discovery of 5 connected stars described as exotic [5] shown in Figure 2. These Stars most probably would have planets. Any inhabitants of these planets would have sky where there could sometimes be no fewer than 5 suns of different brightness lighting up the landscape. This structure again looks like a molecule.

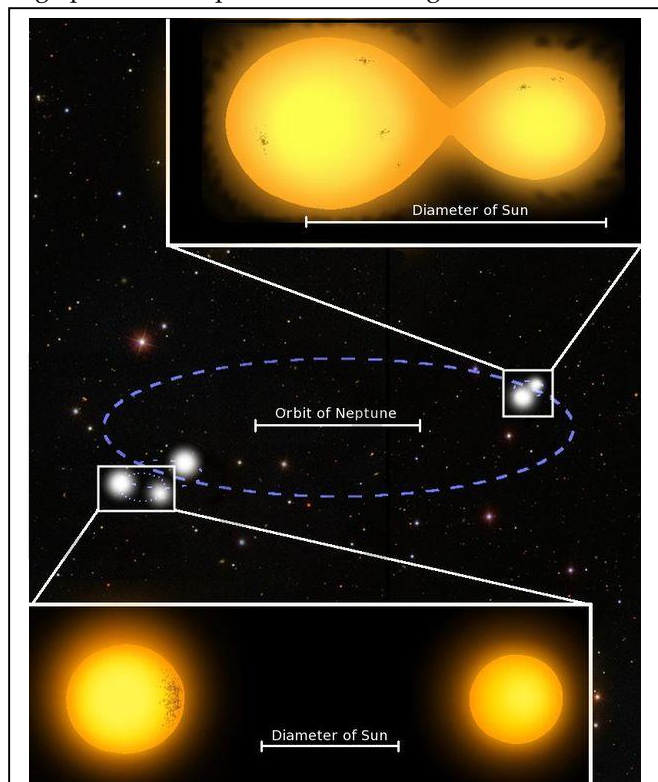


Fig. 3. Five connected Star System called Exotic

## 6.3 LANIAKEA

A team led by Brent Tully used a database that compiles the velocities of 8,000 galaxies, calculated after subtracting the average rate of cosmic expansion. The researchers used an algorithm to translate these velocities into a three-dimensional field of galaxy flow and density.

This method is superior to merely mapping the location of matter, because it enabled scientists to build a map of uncharted regions of the Universe. It relies on detecting the galaxies' influence, rather than seeing them directly.

Moreover, the galaxies' motions reflect the distribution of all matter, not just that which is visible in our telescopes – including dark matter.

Discounting cosmic expansion, the map showed flow lines down which galaxies creep under the effect of gravity in their local region (see Figure 3). Based on this, the team defined the



edge of a supercluster as the boundary at which these flow lines diverge. On one side of the line, galaxies flow towards one gravitational center; beyond it, they flow towards another. "It's like water dividing at a watershed, where it flows either to the left or right of a height of land," said Tully.[6]

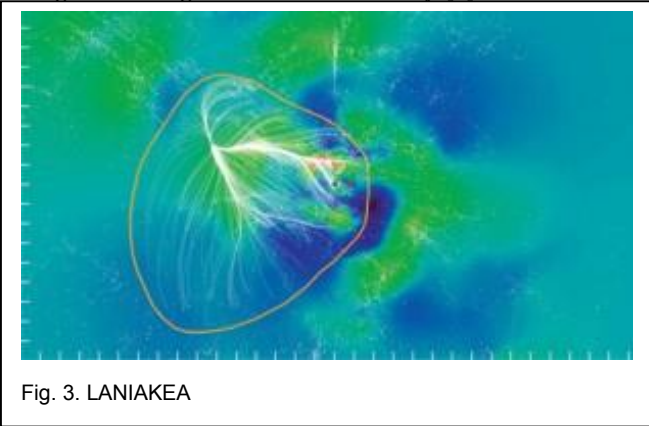


Fig. 3. LANIAKEA

So as the Tully team has said the Laniakea shows that Galaxies flow seems to give the appearance of flow of Water. Which vindicates the idea that Universe behaves like Liquid or Gas. Author believes that we can create an exact Laniakea model in laboratory where Atoms Nucleus are considered as stars and electrons are considered as planets.

For the rest of the paper Author will take Observable Universe as a gaseous flow.

## 7 SLUGGISHNESS OF UNIVERSE

The above given picture by Author however got one flaw that breaks the relation between Laniakea and Gaseous flow. The flaw is that if we consider suppose Laniakea as Gaseous flow. A small tiny movement of flow in Laniakea possibly represents millions of year. But whenever we see gas in laboratory such flow will take place in seconds or at max minute.

The answer to this flaw can be answered by Quantum Mechanics through Time dilation. Now let us explain a little about time dilation first. There are two types of Time Dilations.

### 7.1 Relative Velocity Time Dilation

When two observers are in relative uniform motion and uninfluenced by any gravitational mass, the point of view of each will be that the other's (moving) clock is ticking at a slower rate than their local clock. The faster the relative velocity, the greater the magnitude of time dilation.

For instance, two rocket ships (A and B) speeding past one another in space would experience time dilation. If they somehow had a clear view into each other's ships, each crew would see the others' clocks and movement as going more slowly. That is, inside the frame of reference of Ship A, everything is moving normally, but everything over on Ship B appears to be moving more slowly (and vice versa).

The time difference thus produced can be calculated by below equation:

$$\Delta t' = \frac{\Delta t}{\sqrt{1 - \frac{v^2}{c^2}}}$$

### 7.2 Gravity Time Dilation

Gravitational time dilation is a phenomenon whereby time runs slower when in a higher gravitational potential. Put simply, the closer you are to a large body like the Earth the slower time runs, thus time runs slower for someone on the surface of the earth compared to someone in orbit around the earth.

Whilst the Einstein's field equation for General relativity is very complicated the equation for time dilation is much simpler and bears certain resemblance to the equation for time dilation for relative motion. The equation is:

$$t_0 = t_f \sqrt{1 - \frac{2GM}{rc^2}}$$

In this equation  $t_0$  is the proper time for an event, i.e. the time measured when observer and event are in the same gravitational potential and  $t_f$  is the time as measured when at an infinite distance from any mass. The values  $G$  and  $c$  are again the Newtonian gravitational potential and speed of light respectively and  $M$  and  $r$  are the mass of the object you are near and  $r$  is your distance from said object respectively.

### 7.3 Time Dilation to Answer Sluggishness of Universe

As we said Author proposes that Universe is a gaseous flow. Suppose it is happening in a Bottle and Human is watching it.

The Human is solid and Gas is well gas in which atoms are far more separated and fewer in density. So first if any point that will lie between Human and bottle, then, if we consider gravity effects, then, gravity pull of Human will be more than bottle with gas. And hence gravitational time dilation will make time to Human move slower than time in gas bottle.

In terms of Velocity time dilation. We will show that if you can compare the tininess of Atom to Human. Then you can guess that a Human can move billion trillion times more distance with more velocity than an Atom and its parts. This difference in relative velocity causes massive time dilation which makes measured time at Atoms run at billion times faster. Alternatively put velocity time dilation slows up time massively at Human end.

The above paragraph can alternatively be summed up as. Because Human movement in relativistic terms is trillion billion times more than in atom. And because according to Einstein nothing can travel faster than time. The time runs very fast at Atom end to compensate it.

Now let's try to calculate this time difference.

#### Gravity Time Dilation gain:

At sea level and at 15°C, air has a density of approximately 1.225 kg/m<sup>3</sup>.

Average density of Human Body is 985 kg/m<sup>3</sup>.

So the ratio between densities is about 804.1. So there won't be significant time difference. But let's calculate anyhow.

Let's suppose mass of point in bottle is  $M$ . So mass at Human will be 804 $M$ . Suppose we measure distance close to Human Atom because we are taking Human clock for calculation. And

as we are comparing Atom to solar system we can take solar system boundary as boundary of Atom. At the farthest reaches of Solar System is supposed to be Oort cloud at 1.87 light year away orbit. So let's suppose take it approx  $10^{25}$ m. But Distance between this point and Nucleus of Atom in bottle will be million trillion times that distance.

So Time ratio will be:

$$T_r = \frac{\sqrt{1 - \frac{2G \cdot 804M}{10^{25} \cdot c^2}}}{\sqrt{1 - \frac{2GM}{10^{\text{million billion trillion}} c^2}}}$$

$$\text{As } \sqrt{1 - \frac{2GM}{10^{\text{million billion trillion}} c^2}} \approx 1 \text{ So}$$

$$T_r \approx \sqrt{1 - \frac{2 \cdot 274 \cdot 804 \cdot 2 \cdot 10^{30}}{10^{25} \cdot 9 \cdot 10^{16}}}$$

$$T_r = \sqrt{1 - \frac{2 \cdot 274 \cdot 804 \cdot 2 \cdot 10^{30}}{9 \cdot 10^{41}}}$$

$$T_r = \sqrt{1 - \frac{2 \cdot 274 \cdot 804 \cdot 2 \cdot 10^{30}}{9 \cdot 10^{41}}}$$

$T_r \approx 1$  So Gravity time dilation will be very miniscule

#### Relative velocity Time Dilation gain:

This play a major role. To make an approximation here. We need to consider an example of a rotating cycle wheel. If cycle wheel rotates by  $180^\circ$  in 1 second. Then distance travelled by the point on tip of Tyre will be more then distance travelled by point very close to rotating axis. So therefore velocity at tip of tyre will also be more then at close to axis.

Same is the case of human observing the bottle. If we consider any nucleus of Atom. The Human will be moving massive more than any sub-atomic particle like electron can move around that nucleus in bottle. The difference will be in million trillion times considering the magnitude of sizes. So we can say that velocity difference will be of the order of close to speed of Light. Because anything when approaches speed of light causes

time dilation of amazing magnitude. Please see the chart in Figure 4 for more clarity:

It approaches infinity at speed of light.

So we can say that it is possible that while a Human has just raised his finger. A Universe in Bottle may have had completed millions of years.

Now lets prove why Humans will be moving at velocity of light as compared to sub-atomic particle. Suppose we taken an Atom and considers it the size of solar system. The distance of Earth from Sun is  $1.496 \cdot 10^{11}$ m and let's suppose we take it as D. But a Human will be at same time at a distance of million billion trillion atoms apart. So velocity ratio will be.

$$V_r = \frac{\frac{\text{million billion trillion} \cdot D}{T}}{\frac{D}{T}}$$

$$V_r = \text{million billion trillion times}$$

So if nothing can beat speed of Light then it will be at least very equal to Speed of Light and will hence cause massive time dilation. And so it is possible that by the time humans just moves by a small moment, a universe of Atoms in bottle may have completed millions of years according to clock available on any electrons of Atom of that Universe of Atoms.

## 8 TIME DIFFERENCE BETWEEN ATOM AND HUMAN LEVEL

Let's dig-up more and elaborate on why we should not take time of Human clocks into consideration when we are seeing at Atom.

Let's suppose a Researcher is watching an Atom in Lab. If we put nucleus of Atom as center point. Then whatever the distance of electron will be from nucleus. The distance of Human will be "million billion trillion" times more. So suppose 1 second has passed on Human clock. In 1 second the amount with which a Researcher can move is "million billion trillion" times then possible by electron if considered as Planet around Nucleus (Sun). Therefore velocity which is D/T at Researcher can go to "million billion trillion" times then at electron If we consider time according to Human clock applied at both. But as we know when velocity goes equal to speed to light the time start slowing at speeding body or starts accelerating at slower body. Therefore time in Atom accelerates at unimaginable pace. Therefore whatever is happening at Atom should never be considered as per Human clock. Clock at Atoms constituents runs too much faster than Human clocks. **1 second to Human might be equal to millions of years at electron in Atom.**

This time difference proposes a new view to look at Atom and its constituents and might explain many unexplained phenomena happening at Atomic Level.

Like suppose why light behave as mass-less waves, and at other times it acts like particles with mass. The reason with new theory can be that at the subatomic particles, time passes a millions billions billions times faster then Humans. But the clock has limitation to not overpass speed of light. So SubAtomic particles moves at such a fast pace that they appear as wave and only when observed behaves as particle. Many other unexplainable experiments on atom at LHC may well be explained by this new theory.

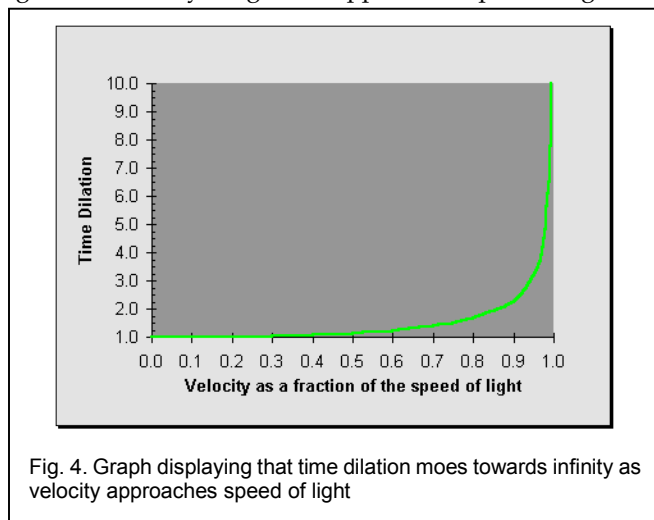


Fig. 4. Graph displaying that time dilation moes towards infinity as velocity approaches speed of light

## 9 CONCLUSION

Seeing the postulates we can conclude that Atom Mimics Solar System quite well. And most specifically it mimics gaseous System. And while looking at Atom we should not Consider Human clock. A Clock at Atom will be ticking at much higher rate than Human. One second on Human Clock might mean many thousand years at electron. This new point of view should be studied. It may help us explain many phenomena observed at Atomic and sub-atomic level. And also how Universe works.

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