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Existence of Matter in the Universe

CENGİZ AKSAKALLI[1*]
[1]*Pasinler Vocational School, Atatürk University, Erzurum, Turkey*

Abstract

This study was conducted as an attempt to determine the process of existence of the universe and whether there is another volume that restricts the universe because of the metric expansion of space, and to determine whether there may be a new universe or existence in the case of extinction of all the universe by way of mathematical and physical functions.

Keywords: Universe, movement of matter, existence.

1.Introduction

Considering the products that the technology offers to us, we can make a definition of it as below: Technology is the result of the activities about getting products that can effect human life in a facilitative way and partly negatively, as result of having some matters gone through industrial phases with the help of the datum obtained by science. Development of technology depends on the point that the science determined on present matter, has reached. Fundamental sciences like physics, chemistry are intended to determine the rules that the matter has in state of being still or moving. And Mathematics is expressing these rules with the symbols within the framework of mathematical rules. And now let's answer this question: is any kind of knowledge on specified on the matter stable for all values of $t = (0 - \infty)$ time of unit or does it go through a process of changing even if in a small size? There may not be a certain answer to this question. However it is seen that it should be search in the time that can be describe according to the matter and existence of space in which the matter exists.

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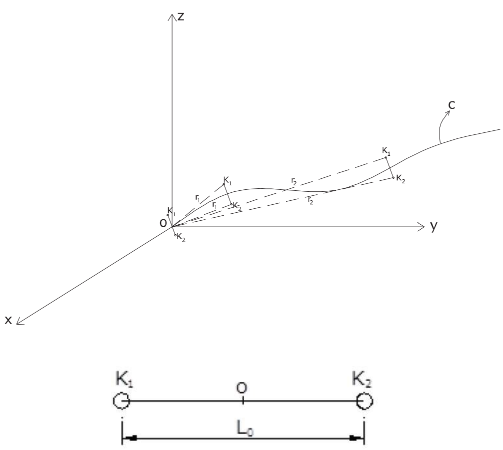
**Corresponding author:*
Cengiz Aksakallı
Pasinler Vocational School,
Atatürk University, Erzurum, Turkey
E-mail: c.aksakalli@atauni.edu.tr

The description of the time can be done in many ways depending on the matter. There are two different ways for measuring time as it is stated in "fundamental of physics" by David Halliday and Robert Resnick. It must be known that we want to know what the time of day is, in order to arrange some things or events in our daily life or some scientific studies. And in many scientific experiments and studies, it is crucial to know how long the exact time of an event is. In second situation, it is not when the event happens, but it is how long it continues (the time period). For this situation, a time standard should be able to respond both of these questions. Time measuring is done by a way of benefiting from a recurring event. In this case, measuring is done by counting the frequency of the event. A pendulum to swing, a mass, a spring or a quartz crystal can be used for this aim. For many years, a solar day (a time required a single rotation of the earth on its axis with respect to the sun) was accepted as a time standard and it is still being used. An average solar second is defined as 1/86400 of a day, and it is called universal time.

It is measured by astronomical observations. Time is a definition that should be done on the frequency of $t = (0 - \infty)$ on the matter. The truest definition should be valid as long as the matter and equivalent states of the matter exist in the universe. Let's consider two material points like (K_1) and (K_2) in any place in space and in any time (t_0) (as it is seen in the Figure 1).

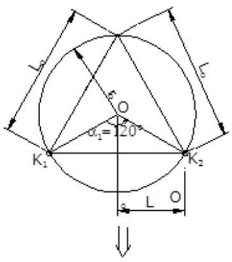


(Figure 1)

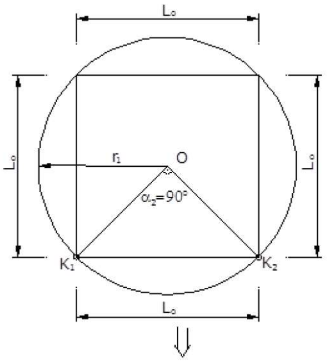
When we assume the movement of material points (K_1) and (K_2) (the distance between them is (L_0) in any place in space and at any speed) begins from (O) and that we can define as [X=X(t), Y=Y(t), Z=Z(t)] on a space curve (C) , $r_n > r_{n-1} > \ldots r_2 > r_1$, the planes that (O) spots state and (K_1) and (K_2) materials in (L_0) -length occur for each position that can be chosen depending on (t) parameter on space curve consecutively.

Circles consisting of chords in (L_0) -length that can be defined with series whole numbers beginning from 3 depending on radii increasing on these planes can be shown as below. Let's assume that radii make progressive circles as below by taking series values ($r_0 < r_1 < r_2, \ldots$) and in a way that the interval between (K_1) and (K_2) spots remaining constant when the movement spot (O) is the center of circle.

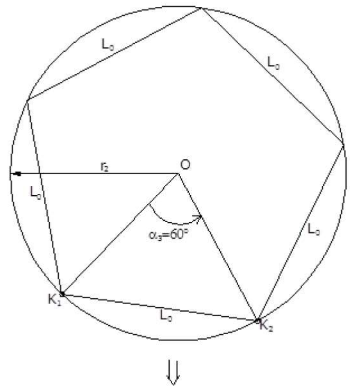
(Figure 2)



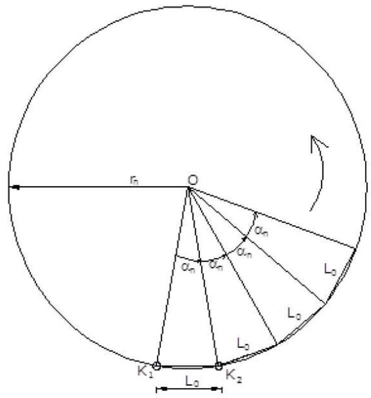
(Figure 3)



(Figure 4)



From these circles we get some circles like the ones that the number of chords begin from 3 and the chord length is (L_0) and the ones that can be chosen forever as in Figure 2, 3 and 4 and can be defined with series counting numbers. While the chord number in any moment of these material spots which are on a position of travelling forward to any direction by making volumes increasing from beginning spot (K_1) and (K_2) is (X_n); the number of isosceles triangle in circle for chosing $X_n \in \mathbb{N}^+$ should be in X_n pieces and the angle of any of these triangles in circle should be $\alpha_n = \dfrac{360}{X_n}$ or $\alpha_n = \dfrac{2\pi}{X_n}$. While α_n angle for this movement that reach up to $t = +\infty$ in space decreases gradually, the number of the chord increases as in Figure 5.



(Figure 5)

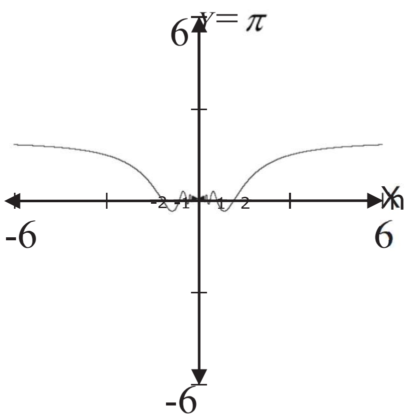
Area of a circulus consisting of in X_n pieces and L_0 length as in Figure 5 per approximate value of π number is $S \cong \pi\, r_n^2$.

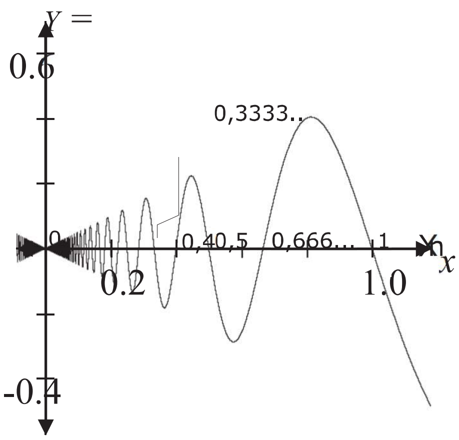
$S(OK_1K_2) = \frac{1}{2}\ r_n^2 sin\alpha_n$ and the approximate total area of circulus should be $S_{app.} \cong \left(\frac{1}{2}\ r_n^2 sin\alpha_n\right) X_n$. Here if we put the value of $\alpha_n = \frac{360}{X_n}$ or $\alpha_n = \frac{2\pi}{X_n}$. By making some computations, we get $\pi = \frac{X_n}{2} sin\left(\frac{360}{X_n}\right)$.

In this equality, there is an approximate value of π for $X_n \in \mathbb{N}^+$. If we define the movement of (K_1) and (K_2) for each series value of time during this movement, we can write $\pi = \frac{X_n}{2} sin\left(\frac{360}{X_n}\right)$ for $X_n \in \mathbb{R}^+$ or the equality of it in terms of radian:

$$\pi = \frac{X_n}{2} sin\left(\frac{2\pi}{X_n}\right) \qquad (1.1)$$

graph drawing of this function of this π number is:





The details of t=(0-1) unit gap

When we have a look at the root, turning points and inflection points of $\pi = \frac{X_n}{2} sin\left(\frac{2\pi}{X_n}\right)$ function for positive-axis, we get the set of numbers as below

$$A_{\pi(root)} = [\dots; 0,3333333; 0,4; 0,5; 0,6666666; 1; 2; +\infty]$$

$$A_{\pi(turning\ point)} = [\dots; 0,308433; 0,364861; 0,4466869; 0,6666666; 1; 2; +\infty]$$

$$A_{\pi(inflection)} = [\dots; 0,3333333; 0,4; 0,5; 0,6666666; 1; 2; +\infty]$$

For the movement of (K_1) and (K_2) material points beginning from (O) point, a movement begins in three dimensional space for central angle of $\alpha_n = \frac{360}{X_n} = 180^\circ \Rightarrow$ X_n=2 unit.

Considering the whole size of π number graph, it is seen that this movement should be define between $t = (0 - +\infty)$ time interval. As this movement on three dimensional space begin from X_n=2 value, the position or movement of (K_1) and (K_2) spot on $t = (0 - 2)$ unit interval should be on a plane or a straight line.

There should be a movement of (K_1) and (K_2) spots corresponding to each spot for positive real numbers set on $X_n \in \mathbb{R}^+$ numerical axis and there should be a (t_n) value on $t = (0 - +\infty)$ unit interval corresponding to this movement on π number graph.

Therefore, we can write $\pi = \frac{t}{2} sin\left(\frac{2\pi}{t}\right)$ equality for $X_n \in \mathbb{R}^+$.

There is a π_n value for each value of time $t_n \in \mathbb{R}^+$ (independent variable). In the period of this movement, let's have a look at the values that π number can take while time is going through infinity:

We should look at the limit of $\lim_{t\to\infty} \frac{t}{2} \sin\frac{2\pi}{t}$=?

There is an uncertainty of $\lim_{t\to\infty} \frac{t}{2} \sin(\frac{2\pi}{t}) = \infty.0$

If we seek a solution $\lim_{t\to\infty}\frac{t}{2}\sin(\frac{2\pi}{t})=\lim_{t\to\infty}\dfrac{\sin\left(\frac{2\pi}{t}\right)}{\frac{2}{t}}=\frac{0}{0}$ by making equality into $\frac{0}{0}$ uncertainty, we can get the result of $\lim_{t\to\infty}\dfrac{\frac{-2\pi}{t^2}.\cos\left(\frac{2\pi}{t}\right)}{\frac{-2}{t^2}}=\lim_{t\to\infty}\pi\cos\left(\frac{2\pi}{t}\right)=\pi$ by derivation of the numerator and denominator.

For this result we can say that: There is a final value that π can take in infinite large value of time $t=+\infty$ for the movement of (K_1) and (K_2) material spots.

$$A_{\pi(root)} = [\ldots; 0{,}3333333; 0{,}4; 0{,}5; 0{,}6666666; 1; 2; +\infty]$$

$$A_{\pi(turning\ point)} = [\ldots; 0{,}308433; 0{,}364861; 0{,}4466869; 0{,}6666666; 1; 2; +\infty]$$

While the value of π number in any moment of time for $\alpha_n=\frac{360}{X_n}$ or $\alpha_n=\frac{2\pi}{X_n}$ central angle's variable values during this movement is $\pi=\frac{t}{2}sin\left(\frac{2\pi}{t}\right)$, there should be an angular velocity and linear velocity depending on this angular velocity.

We can write $\pi=\frac{t}{2}\sin(\alpha_n) \Rightarrow \sin\alpha_n=\frac{2\pi}{t}$ for $t_n\in\mathbb{R}^+$ and $\alpha_n=\arcsin\left(\frac{2\pi}{t}\right)$ for π_n value that is chosen in any value of $t_n\in\mathbb{R}^+$.

If angular velocity of an angle is $w=\frac{d\alpha}{dt}$, we put $\pi=\frac{t}{2}\sin\left(\frac{2\pi}{t}\right)$ in the value of $\frac{d\alpha}{dt}=\dfrac{\frac{-2\pi}{t^2}}{\sqrt{1-\frac{4\pi^2}{t^2}}}$

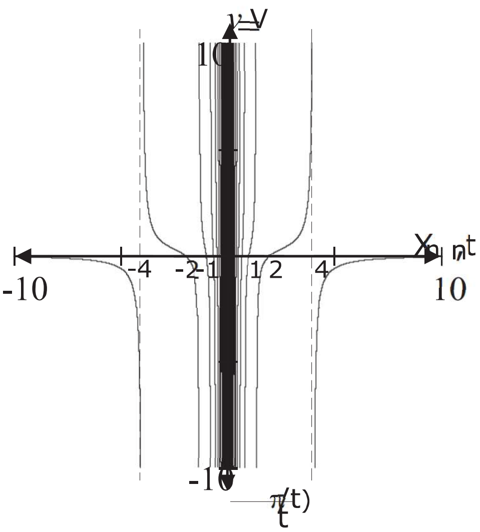
We get $w=\frac{d\alpha}{dt}=\dfrac{-2.\frac{t}{2}.\sin\left(\frac{2\pi}{t}\right)}{t^2.\sqrt{1-\dfrac{4.\frac{t^2}{4}.\sin^2\left(\frac{2\pi}{t}\right)}{t^2}}}$

By editing the equality above, we get

$$W=\frac{-1}{t}\,tg\left(\frac{2\pi}{t}\right). \quad (1.2)$$

By writing the linear velocity of (K_1) and (K_2) material spots is V=W.r, we get the equality of $V=\frac{-r}{t}\,tg\left(\frac{2\pi}{t}\right)$ (1.3)

It is seen that the movement of (K_1) ve (K_2) unit in $t=(0-2)$ time interval should take place in a plane depending on an angular velocity. For the movement that takes place on the plane, (r) values should show the radius of circular area, and in case of $t=(2-+\infty)$ unit of time interval, they should show orbicular volume areas that take place in three dimensional space. Although there isn't any equality about the alteration of (r) in time, when we draw linear velocity graph for increasing values of (r), we see that inflection points necessary in graphs don't change. In parallel with this, we can draw linear velocity for r=1.



(Figure 6)

When determining the roots of linear velocity for its zero value, for V=0. The linear velocity of (K_1) and (K_2) material spots is V=0 for time values that

$$A_{V_0}=[\ldots\ldots;0{,}3333333;0{,}4;0{,}5;0{,}6666666;1;2;+\infty]$$

The detailed figure of graph in $t=(0{,}5-1)$ interval is as below:

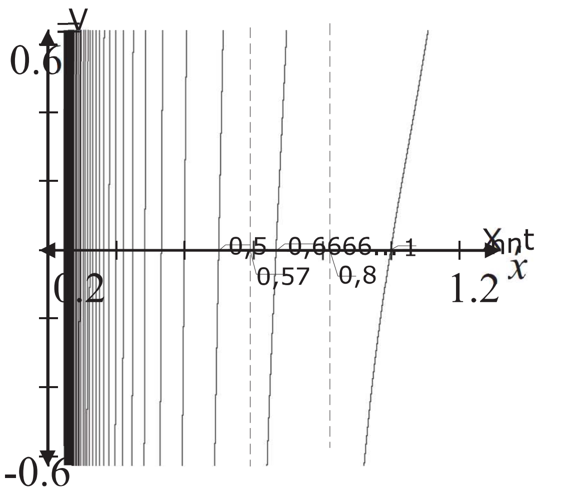
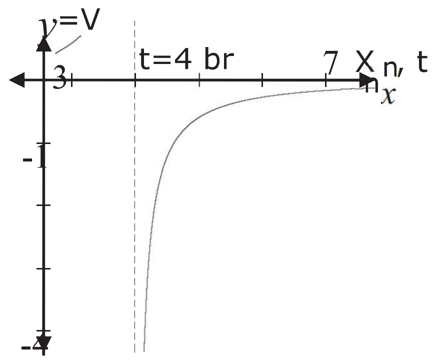


Figure 7

And we can show linear velocity that is next to $t = 4$ unit time period as Figure 8 below:



(Figure 8)

It is seen that the movement of (K_1) and (K_2) in Figure 8 starts to decrease from $V = -\infty$ greatness size and in an irregular speed after a period of $t = 4$ unit. And when we look at the limit of speed function depending on time while going $t \to +\infty$;

There is an uncertainty of $\lim_{t\to\infty} \frac{-tg\left(\frac{2\pi}{t}\right)}{t} = \frac{o}{\infty}$.

The movement of these spots that move on the space depending on the limit of

$$\lim_{t\to\infty} \frac{-\sin\left(\frac{2\pi}{t}\right)}{t.\cos\left(\frac{2\pi}{t}\right)} = \frac{-\sqrt{1-\cos^2\left(\frac{2\pi}{t}\right)}}{t.\cos\left(\frac{2\pi}{t}\right)}$$

$$= \frac{-t.\sqrt{\frac{1}{t^2} - \frac{\cos^2\left(\frac{2\pi}{t}\right)}{t^2}}}{t.\cos\left(\frac{2\pi}{t}\right)}$$

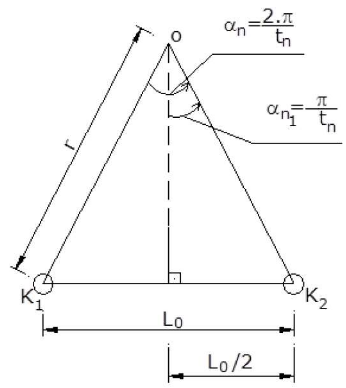
$$= \frac{-\sqrt{\frac{1}{t^2} - \frac{\cos^2\left(\frac{2\pi}{t}\right)}{t^2}}}{\cos\left(\frac{2\pi}{t}\right)} \lim_{t\to\infty} = \frac{\sqrt{\left(\frac{1}{\infty} - \frac{1}{\infty}\right)}}{1} = 0,$$

stops after a time that is infinite large but finite. And this is time ($t = +\infty$) that π number takes the final value.

As we look at the set of time that linear velocity reaches ($V = +\infty \ and \ V = -\infty$) and the set of time that horizontal asymptotes take place, we get the set of

A_{V_∞}
$= (0, \ldots..0{,}3076923; 0{,}363636; 0{,}444444; 0{,}571428; 0{,}8; 1{,}33333333; 4)$

As we draw the figure 9 below for the movement of (K_1) and (K_2) material spots on any t_n time.



(Figure 9)

We get the equality of (1.4) $L_0 = 2.r.\sin\left(\frac{\pi}{t_n}\right)$ by writing $\sin\left(\frac{\pi}{t_n}\right) = \frac{\frac{L_0}{2}}{r}$.

As we look at the graph of $L_0 = 2\sin\left(\frac{\pi}{t}\right)$ function in $t = (0 - +\infty)$ unit of time interval as $r = 1$ unit of time formula (depending on the fact that $L_0 = 2r\sin\left(\frac{\pi}{t}\right)$ inflection points of this function doesn't change for the increasing values of (r), we get the graph in Figure 10.

And the turning point of this graph will be $L_0 = L_{max}$ ve $\alpha_n = 180^0$ in in a period of t=2 unit of time.

As $L_0 = L_{max} = 2r\sin(90^0)$, $L_0 = L_{max} = 2r\sin(90^0)$. And the similar situation is also true for element of the set below:

$$A_{L_0(inflection)} = (\ldots.0{,}18181818; 0{,}222222; 0{,}285714; 0{,}4; 0{,}6666666; 2; +\infty)$$

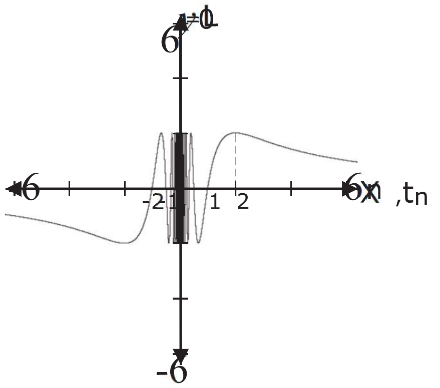


Figure 10

It is seen in this figure that the length of time (L_0) gets shorter in a irregular speed beginning from the first turning point in $t = 2$ time of unit.

And with the limit of $\lim_{t\to\infty} 2\sin\left(\frac{\pi}{t}\right)$ =?, we get $\lim_{t\to\infty} 2\sin\left(\frac{\pi}{t}\right)$ =0.

When we determine the turning point of function, the solution of function $\frac{dL_0}{dt} = \frac{-2\pi}{t^2}.\cos\left(\frac{\pi}{t}\right)$ give the turning points of $L_0 = 2\sin\left(\frac{\pi}{t}\right)$ equality. We can get the solution set as below:

$$A_{L_0(inflection)} = (\ldots.0{,}18181818; 0{,}222222; 0{,}285714; 0{,}4; 0{,}6666666; 2; +\infty)$$

The solution set of the equalty of $L_0 = 2\sin\left(\frac{\pi}{t}\right) \Rightarrow 0 = 2.\sin\left(\frac{\pi}{t}\right)$ gives the set of values in which the lengths of L_0 are zero. We can get it as below:

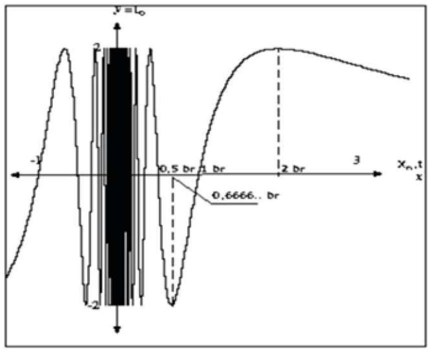
$$A_0 = (\ldots..0{,}142857; 0{,}1666666; 0{,}2; 0{,}25; 0{,}333333; 0{,}5; 1; +\infty)$$

However, it is clear in the graph that the length of (L_0), on two-dimensional plane is zero (for infinite times)

$$A_{L_0} = (0; \ldots..0{,}142857; 0{,}1666666; 0{,}2; 0{,}25; 0{,}333333; 0{,}5; 1; +\infty)$$

$$A_{L_0(inflection)} = (\ldots.0{,}18181818; 0{,}222222; 0{,}285714; 0{,}4; 0{,}6666666; 2; +\infty)$$

As for the sets above, the detailed figures of the graph (figure 10) in $t = (0 - 1)$ time of unit and $t = (2 - +\infty)$ time of unit interval will be as the figure 11 and figure 12.



t= (0,5-1) time of unit interval (Figure 11)

For $t = 0$, the linear velocity and length is uncertain.

However, for the nearest spot to t=0 spot on numerical axis that can be chosen, the formula should be V=0 and $L_0 = 0$, as the function of $\pi = \frac{t}{2}\sin\left(\frac{2\pi}{t}\right)$ is a kind of function that decreases for infinite times.

For $\varepsilon = t \cong 0$, V=0 and $L_0 = 0$ can be acceptable on condition that the time in value of $\varepsilon > 0$ that is the nearest spot to choose, is defined for the first time.

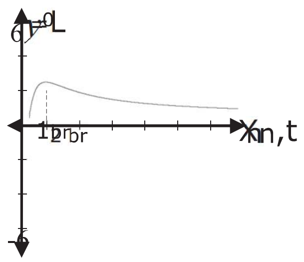


Figure 12

Considering the intersection set of values set in which the length of (L_0) of linear velocity is zero, we get the set of

$$A_{V,L_0} = (\ldots\ldots\ldots..0{,}2; 0{,}25; 0{,}3333\ldots; 0{,}5; 1; +\infty)$$

These particles exist for values of time that the elements of set show but they disappear for series value. In this existence- nonexistence process, as the last existence takes place in $t = 1$ time of unit, the last nonexistence should be in $t = +\infty$ time of unit value for these particles. We can assume these material spots, which were initially accepted as different spots like (K_1) and (K_2), as single material spot (in L_0 length) which is between two edges of a single material spot as in figure 13 below.

And this S_{mn} mass consists of the total of these infinite small spots that are reverse of each other or these particles. The results that are obtained by the movement of these particles in $t = (0 - +\infty)$ time of unit should be valid in live or dead S_{mn} mass

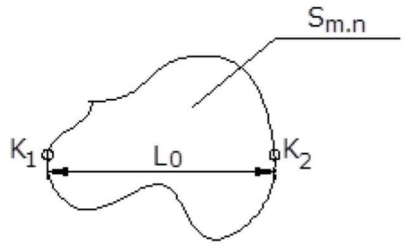


Figure 13

The results that are obtained for the function of (π, V, L_0) depending on figure 13 as above, should be valid also for (S_{mn}) material spot above.

And what we can conclude for the mass is:

-K1-) The particles that represents (S_{mn}) mass don't exist in three dimensional space and they disappear in a way that they overlap and make a spot on a plane in space in the case that the linear velocity and length of any material spot like (S_{mn}) in universe or space are zero.

-K2 -) the moment that the linear velocity and length of any material spot are zero is when (K_1) and (K_2), material spots, can destroy each other by overlapping. These material spots are infinite small and massles, reverse particles as they can move on two dimensional plane and their linear velocity can rise to $V = +\infty$

-K3-) (S_{mn}) mass, live or dead, is any kind of (M) mass that has got a volume in space.

Therefore, we can say that (K_1) and (K_2) material spots dissepeared in the space for the values of $t_n \in \mathbb{R}^+$ of the time in which these spots or (V,L_0) values are zero, or element of the set

$$A_{V,L_0} = (0,\ldots\ldots\ldots\ldots 0{,}2; 0{,}25; 0{,}3333\ldots; 0{,}5; 1; +\infty)$$

Simultaneously, these spots, with the starting values, V=0 and L_0=0 come into existence in universe or space as you can see in graphs. This existence or absence period repeated infinite times in two dimensional space (in $t = (0 - 1)$ time of unit interval). These material spots represent all the matter or equivalent states of matter that are existing in universe. About this fact, we can make the comment as follows.

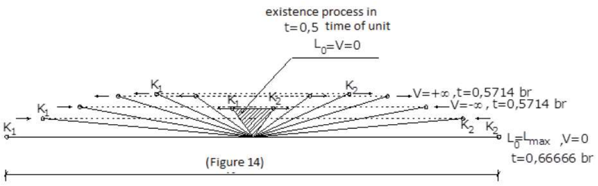
As two dimensional space where there is the matter that is created out of nothing doesn't exist, these particles (for $t_{ilk} \cong 0$ values of time) in the space doesn't exist or isn't created yet.

However, there isn't two dimensional space or it isn't created yet. More clearly, $t_{ilk} \cong 0$ state of time is the state that nothing is created. Considering that a plane should consist that we can define with at least three spots so that (K_1) and (K_2) material spot consist from a single spot in $t_{ilk} \cong 0$ moment of time, no spot can disappear in the period that these material spot disappear in t=(0-1) time of unit interval. Therefore, we can say that in $t_{ilk} \cong 0$ moment of time, three spot were created from a spot where nothing could exist in such a way that a plane in infinite small scale could occur.

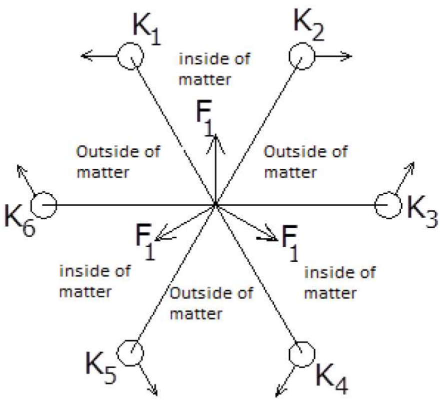
And simultaneously, another two spot occurred from three reverse spots like (K_1) and (K_2) ,and in $t_{ilk} \cong 0$ moment of time six reverse and massless spots that state the infinite small scaled matter in universe. Considering this existence- nonexistence process that repeated infinite times in two dimensional space (in t=(0- 1) time of unit interval), these six particles like (K_1) and (K_2) should overlap and disappear in three spots. As (K_n) and (K_{n+1}) material spots which exist for second time, should exist in three spots, in this second case, it is seen that 6x3=18 reverse particles should exist. This existence-nonexistence process that repeated infinite times in two dimensional space (in t=(0- 1) time of unit interval) can be seen in graphs above and we can say that the number of these particles can increase in any existence moment (t=(0- 1) time of unit interval) with the equality that form a geometrical progression as $X_n = 6x3^n$ for $n \in \mathbb{N}^+$. And we can also say that the matter begins to form from this moment after the beginning of movement of atomic or subatomic particles in space in a time of t=2 depending on the increasing number of these particles.

In the figures below, you can see the position of the first six spots in infinite large which consist in $t_{ilk} \cong 0$ moment of time, for the movement in the linear velocity and length graphs.

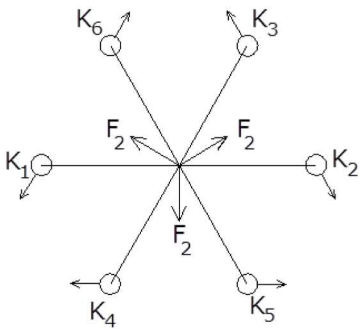
When we define the movement for the figures below by determining the existence- nonexistence time interval as t=(0,5-1).



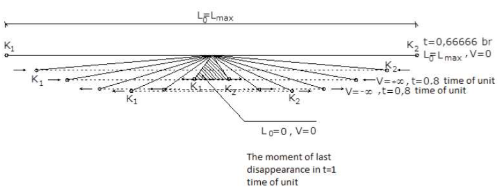
(Figure 14)



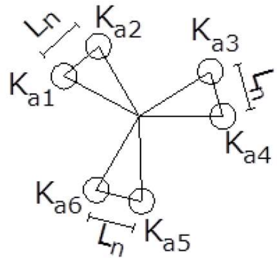
(Figure 15)



(Figure 16)



(Figure 17)



(Figure 18)

These particles in t=0,5 time of unit interval consist with the values of $L_0=0$, $V_0=0$. While Linear velocity increases at an irregular- changeable speed, the length and expanding space depending on the length also expand and increase at an irregular- changeable speed. Then, it increases as $V= +\infty$, in a time of t=0,5714, and in the same time, it stops for a instant as $V=0, L_0=L_{max}$ in a time of t=0,6666 by decreasing in a reverse way. Equivalent force (Figure 15) that moves these particles during this movement have an impact inside of matter.

The definition mentioned here for inside of matter is done for (S_{mn}) mass.After that, equivalent force realizes a movement for these particles by having an impact from outside of the matter (Figure 16) With its starting position of V=0, $L_0=L_{max}$, linear velocity increases at an irregular-changeable speed in t=0,8 time of unit and in a value of $V= +\infty$ time of unit, linear velocity changes in a reverse way, decreases from a value of $V= -\infty$, and in t=1 time of unit, it overlap and then disappears in a way of V=0, $L_0=0$. The maximum length that occurs on a plane in a time of t=2 by realizing its movement for the last time simultaneously as in figure 14 becomes shorter and the process continues as $L_{max}>L_{n+1}>L_{n+2}>L_{n+3}$ ……..

Let's ask this queston: do the elements and their building piece of these elements, atoms consist in the universe in way that is connected with the distance of (L_n) between the subatomic particles depending on the movement of these particles?

And now, let's ask the question that people always wonder throughout history:

What would be $\lim_{t\to\infty}\frac{dV}{dt}$ =? , if we expressed the volumes that was formed by two material spots moving in space in way of V=f(t) as the *function of time*?

SOLUTION:

If we put the orbicular volumes, formed by this material spot that was moving depending on the study mentioned above, instead of the values of V=$\frac{4}{3}$.π.r^3, then π=$\frac{t}{2}$ .sin$\left(\frac{2\pi}{t}\right)$, we get

$$V = \frac{2r^3t}{3} \sin\left(\frac{2\pi}{t}\right)$$

when we look at the limit of the function of $\frac{dV}{dt}$

$$=\frac{2r^3}{3}\sin\left(\frac{2\pi}{t}\right) - \frac{2\pi}{t^2}\cos\left(\frac{2\pi}{t}\right)\frac{2r^3}{3}$$

$\frac{dV}{dt}=\frac{2r^3}{3}\sin\left(\frac{2\pi}{t}\right) - \frac{2\pi}{t}\cos\left(\frac{2\pi}{t}\right)\frac{2r^3}{3}$, we get the value of

$$\lim_{t\to\infty}\frac{dV}{dt}=\frac{2.r^3}{3}\sin\left(\frac{2\pi}{t}\right) - \frac{2\pi}{t}\cos\left(\frac{2\pi}{t}\right)\frac{2r^3}{3} = 0$$

The values of zero that we get, shows that any (M) mass can turn into these particles in the value of $t = +\infty$ of time and the planes may disappear by making black holes in the universe.

The value of $t = +\infty$ is the moment that the result of V=0, π =0, L_0 =0 which is determined on the values of $t = +\infty$ on (π ,V, L_0) graphs above, takes place.

However, according to this result, we can say that existence of a matter or any (M) mass is limited to space and there is not any other volume that limits the universe.

If there was any other volume that limits the universe, there wouldn't be $\frac{dV}{dt}$=0 for this $S_{m.n}$ mass. Because, the universe is expanding ceaselessly as everybody knows. And this occurs at an irregular and increasing speed. The universe we live, owes its existence to this expanding that occurs as a result of the planes forming in the process. At the moment this expanding stops, (it must be like this, otherwise we wouldn't get the result of $\frac{dV}{dt}$=0) the universe must disappear in a time of $\frac{dV}{dt}$=0 as there isn't any other volume left that limits the universe. When we take in consideration the first consisting moment of the universe depending on the fact that there isn't any other volume that limit it, whatever the condition that ensures these particles existing in space, there can't be a equivalent response in universe, because is effect outside the universe. If there was an energy, we would say that there was the energy and the equivalent matter of it and the volume of this matter outside the universe. This condition can somehow give rise to force or energy that is increasing at an irregular speed and necessary for the movement of these particles, and it can also give rise to planes that are expanding at a changeable speed for these particles to move on.

This condition cause to a disappearance or a decrease in volume of mass as a result of effecting from outside the spots, while it can lead to an existence or an increase in volume of mass as a result of an affection from inside the matter or between (K_1 and K_2) spots. If any (M) mass in universe consists of infinite (K_1 and K_2) spots, the physical movement of this mass in space show similarity with the one of these particles.

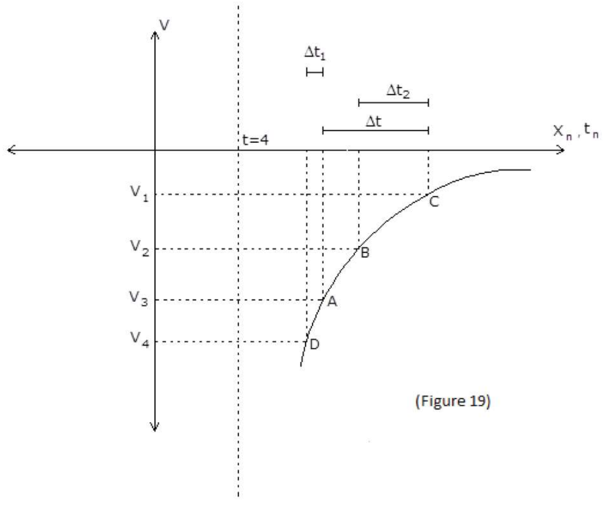
As we mentioned above, the last speed of the mass in universe has reached up the value of $V = -\infty$, in t=4 time of unit, and now the speed of these particles in universe should be the decreasing value of $V = -\infty$ value. Thus, changing or decreasing in the speed of rotation of the earth wchich can be measured by caesium clock may be the result of this process. The moment that the speed of rotation of the earth completes or stops, should be the last defined time on the mass of the earth. This moment is the last definition that can be done about downfalling of mass into matter in universe. In other words, this is the moment of doomsday on the matter. As long as the matter consists, a definition of time must be somehow done, and this can be possible only when a smilar process or a movement of these particles in a way that they move away in reverse direction depending on the energy increasing in the matter comes true. If we have to define more clearly the physical phenomenons about our world depending on the movement of these particles, we can say that the earth, rotating now in counter clock wise, must start to rotate in clock wise and in an irregular increasing speed. Once again, during this process, an energy increase at an irregular speed inside of matter is expected. And a volume increase comes true as a result of this energy increase. The physical phenomenons described in Koran (the holly book of Muslims) as doomsday, must come true for the limit values of earth rotation speed, energy increase and volume increase. As the linear velocity increases gradually, the days that we define on the clock for the earth draw in.

This event is expressed in a hadith of Prophet Muhammad: "Doomsday will not come before time draws close, so that a year will be like a month? a month, like a week? a week, like a day? and a day, like an hour." [Tirmidhi]

Then, the volume of the earth in space increases gradually and it disappear in a plane as the rotation speed increase more and more. But we can't say that this disappearance is everlasting for these particles. Long duration existence of the black holes in galaxy is an evidence of the fact that : when the whole universe disappears in a single black hole and forms the biggest plane to be defined, a second existence may come true in a similar or another way in each spot on this plane . We can say that this is a result of elements of the values set in which the length of L_0 and linear velocity is zero.There are both existence and disappearance process at the same time for each value of time that the set of $A_{V,L_0} = (0,\ldots\ldots\ldots.0{,}2; 0{,}25; 0{,}3333\ldots; 0{,}5; 1; +\infty)$ defines. This condition must be also valid for the last value of $t = +\infty$ time of unit. If this happens like this, in the moment that whole universe disappears, a process of existenc for a second universe starts. After that, nothing can be said about a study about this second existence process. However, we can find out the possibility of a second existence in the verse of the Koran as follow:

"On the day when the earth will be changed to other than the earth, and the heavens (also will be changed) and they will come forth unto Allah, the One, the Almighty" (İbrahim, 14/48)

The lifetime of the matter in the universe can be increased or decreased, if the linear velocity is increased towards inside or outside the matter (as showed in figure 19)



(Figure 19)

Let's look at the movement process or Δt time interval of (M) mass (can be defined in Δt time interval) from (A) spot to (C) spot in the graph as it is seen from the figure. If we increase the linear velocity of the (K_1 and K_2) spots in infinite number from the value of V_3 to V_4, for this (M) mass time expands in an amount of Δt_1, and the life of (M) mass increase and reaches the value of $(\Delta t+\Delta t_1)$.

This situation can occur not only with the forces that are applied externally to (M) but also inside of (M) mass like in existence- nonexistence process above. If we decrease the linear velocity of V_3 to value like V_2 , the time that can be defined for this (M) mass can get lower in a value of (Δt_2) or the life of (M) mass decrease to value of $(\Delta t - \Delta t_2)$.

And, as we mentioned above, the volume or mass (even if it is in infinite small size) of (M) mass must decrease for the decreasing values in $t = (2 - +\infty)$ time interval of (M) mass, atom or subatomic particles consisting after t=2 time of unit depending on this modeling. According to this result, we figure out that this function is deficient, when we look at the decreasing values of mass for $F=M_1xa$ function, the second law of Newton. In this equality, there must be $M_2<M_1$ and $f(t)<1$ for two series values of time. Therefore, it is seen that there must be $F=f(t)xM_1xa$. If a stable F force is applied on any M_1 mass like $t_1<t_2$ in selected two series values of time, in the moment of t_1, there must be $F=M_1.a_1$, and in the moment of t_2, there must be $F=M_2.a_2$.

So we can write $\frac{M_1}{M_2} = \frac{a_2}{a_1}$

As a conclusion, when $M_1>M_2$, $a_2>a_1$ or, if $F_1=M_1.a$ and $F_2=M_2.a$, when acceleration is stable, there must be $M_1>M_2$ and $F_1>F_2$ when $\frac{F_1}{F_2} = \frac{M_1}{M_2}$

A smilar situation must be valid also for the equality of $E=m.C^2$ that Albert Einstein determined.

While the light velocity is stable for two series value of time, there must be $E_1>E_2$, as there is $E_1=m_1.C^2$ for $t_1<t_2$ and $m_1>m_2$ for $E_2=m_2.C^2$.

And this means the energy of any (m) mass decrease as much as $\Delta E=E_1-E_2$, in $\Delta t=t_2-t_1$ time interval. In other words the energy in the matter is not always stable. It decreases as long as it downfalls into matter and it increases as long as the volume of the matter increases. In this modeling, the time is a definition that is made for every one of values of any (M) mass which has a volume in space. Therefore, at least two different and series spots or situations must be selected in order to make a definition for time in a case of any nonphysical or physical phenomenon or situation. When an alteration, mentioned above can not be found, no definition can be made about time. In other words, a phenomenon or a situation is separate from the time. Creator, Allah and Allah's words Koran is separate from the time, and this is a nice example for this condition. Allah knows the truest of everything.

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