Dark Matter and Dark Energy

Mesut Kavak[*a*]

I have been working on the fundamental laws of physics for a long time. During this time, I realized that gravity doesn't work like a Newtonian. The relationship between distance and gravitational force varies with distance. Gravity properties vary for each point of empty space and have some limitations. Gravity varies due to some values between 1/r and $1/r^2$ even for the furthest available distance. However, empty space also has a gravitational effect. This study aims to analyze and discuss these two phenomena.

[*a*]kavakmesut@outlook.com.tr

I. Introduction

Teori *"As we know, according to our observations, objects in outer orbit in galaxies rotate relatively faster than objects in inner orbits. So an orbiting object should be located in space according to:*

$$v = \sqrt{\frac{mG}{r}}$$

But v *and* r *were found not to be related in this way and were associated with Dark Matter. There is almost no such exponential relationship in galaxy-sized celestial bodies."*

"On the other hand, Albert Einstein, using his formulas according to the theory of relativity, calculated that the universe could never remain in a constant volume; however, when Edwin Hubble proved that the universe is always expanding, Albert Einstein called this new energy absurd energy, and he did not care about the dark energy he actually proved with his formulas."

To say something, I must first say something about the nature of gravity as I discovered it.

I.

Since the waves on the empty space entity have time differences between any point in the empty space, matter emerges as a density increasing the acceleration over time. Space turns into particles, and particles are constantly transformed into space. Matter gains its mass by accumulating in a limited volume of space at the speed of light. During its emergence, it constantly experiences potential difference, as there are time differences in the priority of emergence. There is only one work to create the entire universe, and the work is done individually for every point of empty space and therefore for particles. Since the work done is equal to the kinetic energy, since a single work is done at the same speed, in this way any point in the universe gets the same speed. The total energy of matter is in accordance with this work of creation.

II.

As matter experiences potential differences, spots naturally appear that are denser and of lower density and therefore irregular or more regular. Irregular points want to be distributed to lower density or more regular gap points because they have more stress. Matter gains its total energy due to the work done against this resistance of empty space, otherwise the smallest force would not be created as it could move any larger mass in existence at infinite speed.

III.

As the particles emerge from this sliding free field, the field of shifting from disorder to a more regular point also takes the particles with it. This is the root cause of gravity, and gravity only disperses in waves over time.

II.
Gravitational Properties

Teori *Area in Euclidean Geometry; angles and lengths are expressed in integers, not complex and irrational, and there are some constraints for these variables; Therefore, strong proofs of the existence of Euclidean or non-Euclidean geometries, such as Riemann surfaces, are needed to answer the anomaly questions that arise in both mathematics and physics. For example, "the absence of any spherical inclination" raises the theoretical need for a form of energy other than matter and dark matter to create the observably flat universe; which is "what if there is a slope?".*

A representation of an Euclidean geometry is available on fig. 1. Any triangle that does not form a perpendicular can be used instead of this right triangle. The shape was chosen randomly. For the following calculations, the length BD may be longer than AD, for example.

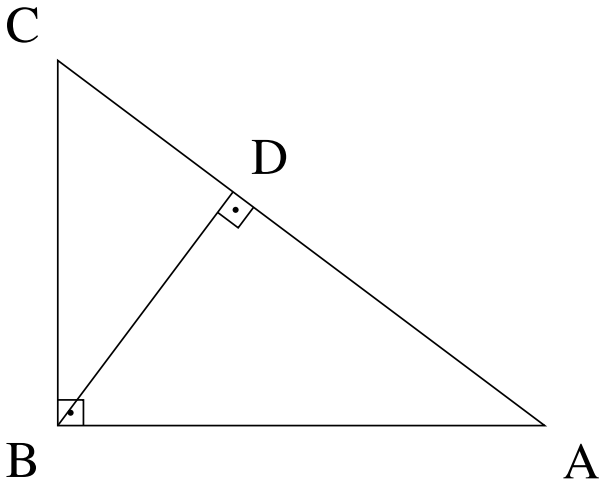

Fig. 1: This is an Euclidean right triangle. In Euclidean geometry, areas, angles and lengths are expressed as integers, not complex and irrational.

In this case, suppose the length AB is extended to a length AB_2, provided that the lengths BD and BC are constant. Here point A is an object freely moving in space; For example, point B is a fixed point whose coordinates are known as a reference to motion in space, and point C as an observer.

I.

With points B and C fixed in space, $AB_2 > AB$ inequality that can be written for the extended hypotenuse on fig. 1 and $BD_2^2 - BD^2 > AD^2 - AD_2^2$ inequality that can be written for its definition, The inequality (1) is obtained, where $BD^2 + AD^2 = AB^2$ and $BD_2^2 + AD_2^2 = AB_2^2$ are the equations produced by the Pythagorean theorem.

$$1 > \frac{AD^2 - AD_2^2}{BD_2^2 - BD^2} \tag{1}$$

Likewise, the equations produced by the Pythagorean theorem for BC=y, BD=h and DC=t, with B and C points fixed in space, are $h^2 + t^2 = y^2$ and $h_2^2 + t_2^2 = y^2$ (2) is the result of the same extension.

$$BD^2 + DC^2 = BD_2^2 + DC_2^2 \tag{2}$$

II.

If the equation (2) obtained with the current conditions is edited, it becomes $DC^2 - DC_2^2 = BD_2^2 - BD^2$; therefore, if $DC^2 - DC_2^2$ is used instead of $BD_2^2 - BD^2$, on the inequality (1), then over the resulting inequality of $DC^2 - DC_2^2 > AD^2 - AD_2^2$, (3) is obtained.

$$1 > \frac{AD^2 - AD_2^2}{DC^2 - DC_2^2} \tag{3}$$

In the current situation, the actual displacement inequalities have been determined.

III.

In this case, suppose that; there is actually no displacement for point A and thus no extension for the hypotenuse. Since the equations for this condition are; $AB_2 = 0$, $DC_2 = 0$ and $AD_2 = 0$, the inequality (3) becomes (4) with these values,

$$DC^2 > AD^2 \tag{4}$$

and (1) becomes (5) for the same values.

$$-BD^2 > AD^2 \tag{5}$$

(5) inequality actually means that AD=DC is impossible; this would mean that orthogonality in the universe is impossible. It also means that no two lengths can be equal.

This means that every equal point in space is physically different at the same time; but after 1 second

it means it has the same speed and energy value; in which sequential formation can be mentioned. Each equidistant point in space is formed in turn.

These also mean that; Since a "middle point" cannot occur for any length or area in the universe for a force causing motion, natural motion must always be "circular motion" and centripetal acceleration is always with motion.

Legal Propositions

The (5) inequality brings some results in physics. These are some legal propositions about the nature of motion and are as follows.

I. The shortest distance between two points is not a straight line. This distance can be measured with an arc very close to the line.

II. It is impossible for a right angle to form in space. The angle can only be close to a right angle according to the energy of the field.

III. Two lines of the same length cannot be drawn from one point to two other points in space. At the same time, no two lengths can be of the same length[*a*].

IV. The area that allows movement of any size does not have a "midpoint" for any part of it of any size; so the motion is always circular with the force causing it and is with centripetal acceleration[*b*].

V. For AD ≠ DC, AB ≠ BC, BD ≠ DC, BD ≠ AD, BD ≠ AB and more changes. In short, when AB is extended, BC or other lengths cannot maintain their original length. The field is therefore absolutely conservative.[*c*]

VI. Parallelism is impossible, just as it is impossible to draw straight lines in space. Every arc must intersect. The intersection point changes according to the size of the finite and conservative field and the angle of arc.[*d*]

VII. The existence of a closed curve is impossible. Only infinite space closes a curve. Limited space, not closed; but it is conservative.

VIII. Movement cannot occur independently of the field. This means that there is absolute entanglement due to the time differences between each point, which in turn is due to formation. All masses are actually counted as a single mass, with the priority of occurrence. Each point occurs in sequence. It means; Since elastic collision in the universe is impossible due to different mass and energy values at the same time, and information can not be lost on this occasion, the preservation of information is a necessity. There is never any loss of energy or mass due to elastic collisions; but their values change, shrinking forever.

[*a*]This means that three or more objects in space cannot be located at the same distance from each other. There is a time difference between every point in space. For the same reference time, each point in space has a different length value. The same length cannot be achieved by addition or subtraction.

[*b*]This is due to the motion of work causing the total energy that matter itself has in the 3rd dimension due to $F = mv^2\sin(\alpha)/r$ causes an outer space movement. Matter moves on its own and is unstable due to constant acceleration.

[*c*]This means; a line and therefore the 1st Dimension cannot be found by itself. The arc requires at least Dimension 2. This means that higher dimensions cannot be created by lower dimensions.

[*d*]Therefore no object in space can maintain its velocity forever; because an opposite force of space always acts.

a. Gravity

Theorem *Gravity is an inevitable phenomenon that arises due to the way the universe is formed according to certain mathematical laws and occurs according to certain conditions.*

- *Matter is a wave formed over space and there is only one work done for all mass. Since the kinetic energy is equal to the work done, the speed at which this work is done*[*a*] *brings energy out for matter.*
- *The main reason is that this single work is done for 1 second, and therefore, even every equal part of space or matter formed on this space during formation, has different values at any time; Therefore, it is necessary to constantly move between different densities in the potential differences that occur.*

[*a*]This speed is the speed of light for our universe and is represented by "c". This "c" value is accepted as approximately 299 792 458 m/s.

I.

Although each equal point of space has the same values at the end of 1 second due to sequential formation, it has different physical quantities at the same time. This will create a permanent potential difference due to a permanent density difference, causing a constant movement between the density differences and a tension at the same time. Although matter wants to move from a very dense medium to a less dense medium, this also indicates the "incompressibility" state of matter, based on the very dense medium condition. Matter moves by releasing the stress on it.[1]

To better explain this phenomenon, although there are many other ways, we should analyze the situation during the extension of the hypotenuse, assuming that the field is conservative on fig. 1. When the length of any component changes, the other lengths of the triangle change with it; but the field is always constant. With this condition, assuming that the right sides of the triangle are the axes and the hypotenuse is extended by a value of "k", $x_2 = x \mp k$ and for a function like $f(x) = ax$, (6a) from the area equation[2], the equation (6) is obtained.

$$x = \frac{\mp k}{\sqrt{2}-1} \tag{6}$$

$$\int ax\,dx = \int_0^{x_2} ax\,dx \tag{6a}$$

A sequence inferred from the (6) occurrences cannot be random. The prompt array value is always divided by something like $\sqrt{2}-1$ and this number is irrational. Because it always divides, more energy and area are always required than would be calculated for a longer "x" value.

II.

Since *Legal Proposition I* only predicts an "arc" or a "curve" instead of a "line segment", the universe is directly in the 2nd Dimension; but since the field, and therefore the energy in the field, is absolutely conserved; then, since momentum and mass will also be conserved, the equation $P = P_x + P_y$ in the 2nd dimension for the total momentum and also the "Geometrically" equation $P^2 = P_x^2 + P_y^2$ with the same components is written. The same is true of all phenomena of motion, such as mass or energy; so for $ds = dx + dy$ and $ds^2 = dx^2 + dy^2$ over them, you have (7) in dimension 2.

$$2dxdy = 0 \tag{7}$$

Here, although both components change over time, their sum is always the same, and this equation shows that the formation of the 2nd Dimension is impossible. Therefore, the Pythagorean theorem, although it needs the main proof, on the other hand, has made a proof supporting the main proof.

Movement in the 3rd dimension occurs via (8) with the equations $ds^2 = dx^2 + dy^2 + dz^2$ and $ds = dx + dy + dz$.

[1]Matter cannot be compressed down to an infinitesimal piece. Since the kinetic energy is equal to the work done, the work done to create the matter and the speed that causes the total motion energy gained by the matter due to this work and the frequency of the formed matter determine this limit. In the denser state, the incompressibility and stress of the substance increase. It takes more energy to create a denser and more disordered space.

[2]Maximum space that can be created, again with an upper value, can be assumed; therefore, such an equality would be appropriate. The important thing here is to transform the shape of the triangle into another shape. It could also be a trapezoid; but the area must be protected.

$$dx\left(\frac{1}{dy}+\frac{1}{dz}\right)=-\frac{1}{2} \tag{8}$$

In order for this movement to occur partially or continuously, there are 5 different possibilities in terms of its formation:

- dx = dy = dz
- dx = dy
- dx = dz
- dy = dz
- None of them

The equality dx = dy = dz is not possible when tried on (8). As for the others, if dx is pulled from (8) and used on ds = dx + dy + dz it becomes (8a).

$$ds = dy + dz - \frac{dy \cdot dz}{2(dy+dz)} \tag{8a}$$

Let it be assumed that here; $ds^2 = dx^2 + dy^2$ ie projection of the same value of ds at the same angle horizontally and vertically with respect to a fixed reference, (8a) equation for dx = dz becomes (8b).

$$dx^2 = dy \cdot dz + dz^2 - \frac{dy^2 \cdot dz^2}{4(dy+dz)^2} \tag{8b}$$

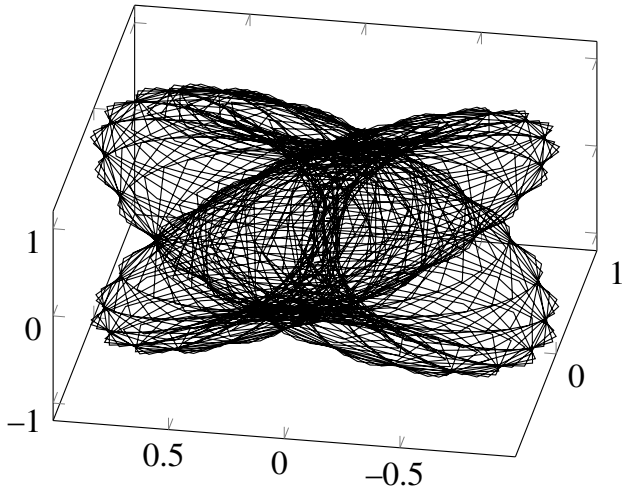

Fig. 2: With the above conservation equations, here is the graph of the parametric function with x(t) = cos(α)cos(β), y(t) = sin(α)cos(β), z(t) = sin(β). Limited representation of mass formation. Even though this shape was like this when all possible areas were scanned at the smallest moment in the first formation of the universe, even if every movement after it is formed does not draw the same shape, it is formed in this limited area.

It can be said that the equations dx = dy and dx = dz are not possible via (8b). dy = dz equals dx/dy = 33/16; but when this value is used on the main function (8) it seems not possible either; then only one possibility remains and "none" is possible. It means; For a slice of motion of any size, the components are always different and cannot take certain values and occur randomly independently of each other. They never intersect for any combination and are always unique.[3]

Gravitational Inferences

The equation (8b) and (6) brings together some results in physics. These are some inferences that support the above propositions about the nature of motion and the formation of gravity, and they are as follows.

I. At least 3rd dimension is required for the gravitational movement to occur.

II. While space always exhibits resistance to motion due to sequential formation, it cannot always be stagnant to relieve stress caused by potential differences that occur. Matter has to move in varying directions even in the absence of external influence.

III. Mass cannot only move along a straight line. The centripetal acceleration created by the circular motion and thus is always accompanied by gravity.

[3]This uniqueness means; space always resists movement; because the value that is tried to be attributed to a component with a theoretical calculation does not match, since the components only take certain values and the external effect itself has to comply with the same rule. A resistance is always felt.

b. Orbit

Theorem *Mass cannot only move along a straight line. The centripetal acceleration created by the circular motion and thus is always accompanied by gravity.*

- *Between "Gravity" and "Central Acceleration" is considered approximately equal, although not an equality, and is expressed as* $F_C \approx F_G$.
- *Orbits are always elliptical.*

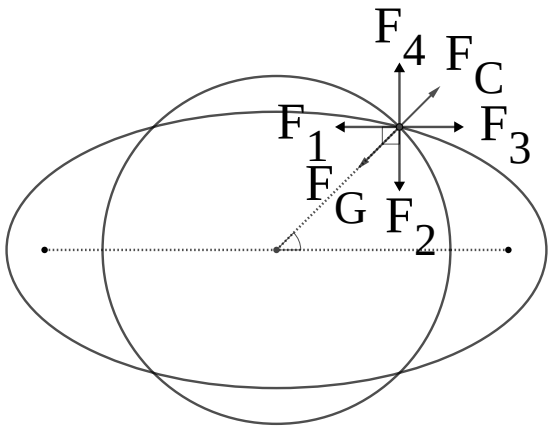

Fig. 3: The figure has a perfect circle and an ellipse. It does not matter which one will be used for the formulation, since the same spatial setup will be done on both. It is assumed that we do not have any information about the orbit yet.

I.

There is an object which is assumed as doing circular or elliptic motion around a mass on fig. 3. For this condition, it becomes

- $F_G = \sqrt{F_1^2 + F_2^2}$
- $F_C = \sqrt{F_3^2 + F_4^2}$

Over $F_G = F_C$ assumption, it becomes (9).

$$F_1^2 + F_2^2 = F_3^2 + F_4^2 \tag{9}$$

This means that in the worst case, the components may not be equal to each other for motion to occur. If any two of these are equal, they are all the same force; thus making it impossible for motion to occur since they are not in the same direction. As a result, with different components

$$F_C = F_G$$

or again with different components

$$F_C \approx F_G$$

we can safely say that it is. These conditions make it impossible to move in a circular or elliptical orbit; because the distance between the object changes over time due to the "result force", even for different components of constant size or for components that change with time to different values; although these two options seem to change the time and direction of the escape or fall, they are not. They cannot escape or fall; because the equation $F_C = F_G$ is maintained for every change in gravitational or centrifugal force; therefore, if the escaping force is caused by the centrifugal force, a gravitational pull of the same magnitude results. That is, the components change and a trajectory emerges that closes a curve. Before a new force of different magnitude and shape is applied, it cannot make a full circle because of the acceleration motion, as the previous force causes acceleration and the distance traveled.

II.

For the spatial analysis of the orbit, the following path can be followed. We can only see this mathematically, without acceleration or other variables.

The resultant force is (10).

$$R = \sqrt{(F_4 - F_2)^2 + (F_3 - F_1)^2} \tag{10}$$

The real solutions of the (10) equation,

- $F_1 = F_3 - R$ ve $F_2 = F_4$
- $F_1 = F_3 + R$ ve $F_2 = F_4$

happens, and as can be seen above these real solutions of the composite, F_1 and F_3 cannot be exactly equal on them; but $F_2 = F_4$ is equal and therefore $F_1^2 + F_2^2 = F_3^2 + F_4^2$ gives a result of "0" over $F_2 = F_4$, making it impossible for motion to occur.

$$F_C \approx F_G$$

or

$$R \approx \sqrt{(F_4 - F_2)^2 + (F_3 - F_1)^2}$$

means that equality is not possible and fixed orbits are not possible. This means that the perfect circle cannot be drawn by orbital bodies either. The orbit can only be close to the normal circle. Essentially it is always strictly elliptical.

III.

According to (10), natural motion is circular motion, and the difference with a perfect circle is very small even in the most perfect situation; because F_1 and F_2 can take very small numbers close to zero; that is, the orbital acceleration due to the components causes an acceleration by the resultant F = ma on (10) even if the component sizes do not change with time, it causes a constant velocity increase in the same orbit, without flying away or falling until it forms a density around the central object. When it reaches the maximum speed, it either means that it has entered the speed of light, or since the mass emerged in 1 second, its existence was scattered in space, and therefore the speed could not increase to the speed of light, but to a different speed limit because the gravitational properties for a unit changed.

- For these reasons an orbit can also mean that it is exactly an external *"extrinsic drive"* if it is not circular.

IV.

As can be seen, through fig. 3, for example, F_1 cannot increase while F_3 increases, or F_3 cannot increase while F_4 increases according to (10) and $F_C = F_G$ equations. The resultant force, which determines the shape of the orbit, cannot be fixed because it is an acceleration movement and therefore has components of varying magnitude with time. That is, after some distance is taken in the direction of the centrifugal force, the distance is taken again in the opposite direction in the direction of gravity.

- Since the change in component size is continuous, it draws a sinusoidal wave on the orbit as a secondary effect. In 3D, it spirals around the central mass.

Orbital Inferences

The equation (9) and (10) brings together some results in physics. These are some inferences that support the above propositions about the nature of motion and the formation of gravity, and they are as follows.

I. Orbital objects constantly experience different distances as they revolve around a mass. There is no continuous increase. There is a constant conversion between gravitational and centrifugal force.

II. If a trajectory is not circular, it may mean that there is exactly an external "extrinsic propulsion".

III. Each orbital object follows a spiral path with a circular or elliptical orbit at its centre.

III.
Gravity and Field Relation

Theorem *Considering inelastic collisions,* (11) *can be written after the collision for two objects moving at the speed of light to each other.*

$$m_1c - m_2c = mc \tag{11}$$

If there is an inequality of $m_1 > m_2$*, the movement will be in the (+) direction; otherwise it will be in the (-) direction. No motion can occur for the equation* $m_1 = m_2$.

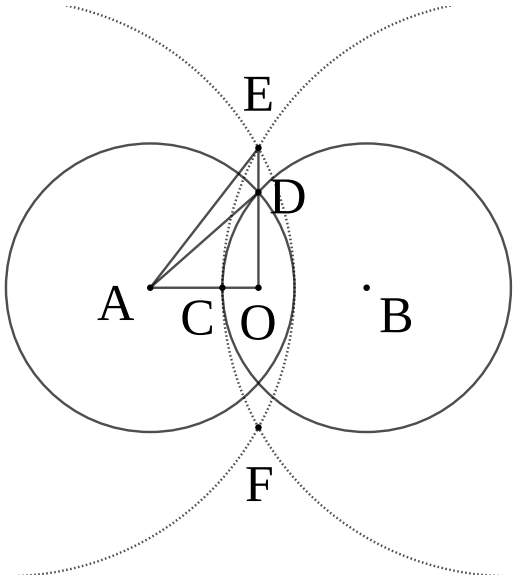

Fig. 4: Gravitational Waves. These waves are waves that matter radiates only by its existence, creates a potential difference where it passes through space, and can cause attraction or repulsion between densities due to this potential difference when interacting with an opposite mass. The figure is representative. A mass at point A cannot be pulled from point E or F from that distance. Masses begin by being pulled "out of their place" by the impinging wave; but since the circle will be very small and the same rule will apply, I have represented it like this to be more specific.

I.

The representation on this fig. 4 is for a single wave. I'm not calculating gravity yet. I'm just analyzing the attraction characteristics. Here on (12),

$$Ft = \Delta mc \tag{12}$$

you can calculate the gravitational force and its path as (+), (-) or 0, where t is the time when gravity arises over a distance at the speed of light due to a fixed wavelength, I derived it and also it doesn't matter anymore.

II.

Now let's deal with fig. 4. There are two waves propagating from points A and B. Larger wave segments are also propagated by the same masses at a greater distance than A and B. Here the length OC is always constant because when the two waves intersect, gravity is the shortest distance along the wavelength at which gravity occurs.

For these definitions, if we subtract the constants, since the mass is also constant and they do not change

$$F = \frac{OD}{AD^2} \tag{13}$$

3D capture is mainly dependent on (13) via (14).

$$F = \frac{d_1 2\pi OD}{AD} \tag{14}$$

Here,

$$d_1 = \sqrt[3]{\frac{3m}{4\pi AD^3}}$$

d_1 is the 1-dimensional density of mass m at point A, d_1/AD is the 0-dimensional density of the same mass. Since OC is constant, we can count it as 1; so it becomes (15) over $(AC + 1)^2 + OD^2 = AD^2$.

$$AC = \sqrt{AD^2 - OD^2} - 1 \tag{15}$$

III.

Now assuming that masses of the same size lie at a greater distance, slightly larger waves appear on fig. 4 for this case. OC is still fixed. Even if it is fixed, as you can see, the other lengths increase and the rule is determined via (15). From (15) we can safely say that the increment AD is always greater than both OD and OA; therefore, if the distance between the same masses gradually increases, (13) indicates that the gravity decreases. If AD converges to OD, the attraction increases.

This means that the equation for attraction also changes with distance.

Gravitational Inferences

The equation (11) and (15) brings together some results in physics. These are some inferences that support the above propositions about the nature of motion and the formation of gravity, and they are as follows.

I. Since it is the only work done for all masses in the universe and all masses are counted as one mass, gravitational motion can be analyzed through conservation of momentum. Conservation of the field causes a constant attraction between the masses.

II. Although movement and shooting occur in 3 dimensions, calculations are made in 2 dimensions.

III. The relationship between distance and gravitational force changes according to the length or shortness of the distance. Gravity properties vary for each point in space and have some limitations. Gravity changes, taking some values from 1/r to $1/r^2$ even for the furthest or nearest distance available.

IV.
Dark Matter

Theorem *"As we know, according to our observations, objects in outer orbit in galaxies rotate relatively faster than objects in inner orbits. So an orbiting object should be located in space according to:*

$$v = \sqrt{\frac{mG}{r}}$$

But it was found that v *and* r *are not related in this way*[*a*] *and associated with Dark Matter. There is almost no such exponential relationship in galaxy-sized celestial bodies."*

[*a*]Vera Florence Cooper Rubin (July 23, 1928 - December 26, 2016), American astronomer who is considered the pioneer of studies on the rotational speed of galaxies.

- Studying the rotation curves of galaxies, he revealed the discrepancy between the predicted form of the angular motion of galaxies and the observed form. This phenomenon later became known as the galactic rotation problem.
- In the 1970s, Rubin found the strongest evidence to date for the existence of dark matter. The nature of dark matter is still completely unknown, but its existence is critical to our understanding of the ultimate fate of the universe.

All is not well. As can be seen from the (15) equation, gravity does not work on classical mechanics and this misleads us as "dark matter".[4] We can't even get accurate results for the Moon, as the gravitational equation changes with changing distance.

---

[4]This is not good news for scientists. Apparently, Newton's calculation can only work on one range. It is not for long distances, nor is it for short distances. The gravitational constant is purely experimental anyway, and can easily obscure the real functions that gravity works on. So it remains fake. We should have already felt responsible for verifying this in another way. Movements in any universe are chaotic. They repeat at an interval; but you need more repetition and more time to draw the big picture; that is, it is misleading because gravity between stars or planets is slow. Maybe you can detect some anomalies like Mercury's declination if they are very close together. In other words, it can be observed that the distance and gravity relationship is above $1/r^2$. For the better, electrons with incredible rotational frequency, for example, are excellent references for motion, and the distance is also short enough to detect the anomaly according to Newton's formula, along with high velocity.

I.

The larger the distance between two objects, the more precise and perceptible the gravitational torque will increase, because gravity arises at the two intersections and the points have time differences. The priority of emergence causes a potential difference between these points. So one of them comes out earlier and thus causes more attraction and torque than the other. The time difference between two consecutive smallest parts of space is negligible, with the exception of macro space. When calculating orbital motion by the classical method, you assume that the resulting centrifugal force must be equal to the gravitational force, regardless of its type; but not entirely correct. You are actually calculating over the static state; because the two objects are standing opposite each other at this time. So if you don't include centrifugal force, the formula is linear gravitational force; however, according to the method mentioned above, one of the intersection points appears later and causes a circular motion at the same time.

II.

If you think that one point came out earlier and you specify that torque F_1 is applied at that point, the second torque from the other point becomes $F_2, F_1 > F_2$. It can also be said that the energy of the medium, that is, the wave, should be conserved. When a space point disappears because it has a frequency of emergence and is not continuous at every point, energy must be transferred to another point. That is, a wave cannot maintain its shape as it dissipates in space over time. The increased torque is stolen from the other second torque point. Again, even if dispersed in the newly emerged space, one of the same two opposite works of Ft before or after as +Ft or –Ft causes some (+) or (-) displacement. Whichever is used first, there will be a translation in that direction. [5]

III.

Since particles are waves formed through space, even if all particles are lost, the total mass, energy, and frequency are retained, so that "empty space" can be used for such a calculation of the opposing force exerted by empty space; but it is very difficult in calculations such as this time difference calculation in galaxies. In fact, if you ignore particles in empty space, the time difference between each cubic meter of space is 1/V, being V is the volume of the universe; however, if a particle appears, the density and thus the volume changes. And the quantities are huge.

For example, for a 1 tonne object, you need about 10^{30} cubic meters of free space according to my calculations; Consider 1/V affected by this value.[6]

Inferences

The equation (11) and (15) brings together some results in physics. These are some inferences that support the above propositions about the nature of motion and the formation of gravity, and they are as follows.

I. As can be seen from the (15) equation, gravity does not work through classical mechanics and this misleads us as "dark matter".

II. The greater the distance between two objects, the more precise and perceptible the gravitational torque will increase; because gravity arises at two intersections and there is a time difference between them.

III. The relationship between distance and gravitational force varies with distance. Gravity properties vary for each point of empty space and have some limitations. Gravity varies due to some values between 1/r and $1/r^2$ even for the furthest available distance.

---

[5]Also, rotation, the rotation of the universe, and therefore the direction in which the masses take place also affect the situation. In this way, linear gravitational force, and hence momentum, is transformed into angular momentum and gravity. For this, there is no other method or alternative due to the conservation of energy. This is not a special phenomenon. This is how the universe works, and sometimes the result is too small to be detected. As a result, the decreasing gravity as the distance increases is provided by the increasing gravitational torque based on the time difference; but to what extent?

[6]In fact, it's good that we can calculate the total amount of matter in the universe by observing, calculating the deviation in velocity, and therefore calculating the time difference over it; but we still have to find a different theoretical method. I do not know yet; but it looks almost as long as the distance between two objects.

V.
Dark Energy

Theorem *Dark Energy is a type of energy that is supposed to continually expand the universe and push galaxies apart. Evidence for dark energy is indirect but mainly comes from three independent sources:*

- *Distance measurements showing that the expansion of the universe is greater in the second half of its life and their relationship to redshift.*
- *Theoretical need for a form of energy other than matter and dark matter (absence of any spherical inclination) to create an observably flat universe.*
- *Measures of large-scale wave patterns of mass density in the universe.*

I.

Any mass or energy is simply "distributed" mass or energy due to uncertainty; but the problem is; What presence, frequency, or density does matter have in empty space due to the presence of matter? What is a reference? What is the amount of assets or spaces?[7]

Since the entire universe arises at a finite frequency, the universe is not fixed at every point in its empty space. Empty space without particles or waves also has a frequency. Before a wave can arise, there must first be a vacuum, since particles appear as waves on this space; that is, particles cannot have a frequency higher than this frequency of empty space; because after this border there will be no place to exit. You must increase the frequency of creation, and therefore the speed of light, or the speed of creation of the entire universe and therefore of the single work done.

II.

Since any mass or energy can only be counted as distributed mass or energy due to uncertainty, the natural frequency holding capacity of empty space since f is the total frequency of the universe and V is the volume of the universe,

$$C = \frac{f}{V}$$

would be for 1 cubic meter.

Regardless of the mass distribution in this volume, space naturally cannot hold a frequency higher than this in 1 cubic meter. If it does, the space will inflate directly. This place then becomes more disordered, and due to the incompressibility property of matter resulting from the finite speed of light, it wants to be dispersed and fixed in a larger area in space. The denser area is more uneven; because the application time and therefore the velocity of the applied force will change, more velocity is needed to create a denser area.[8]

III.

To create denser field at a constant speed during this process, the disorder will only increase as you create denser field. If you create a lower density field, it will want to be fixed with an opposing lower force; but if you create a denser field, the opposing force will be greater. Gravity also works on this principle.

---

[7]**Warning:**

I. The universe gets its volume due to centrifugal force, since only circular motion is possible; however, the volume changes according to the amount of particles produced. If the particles lose their amplitude over time, in other words, if they evaporate, their vibrations decrease according to entropy, and their volume increases. It also makes the universe appear to be expanding with the matter on it; because the amount of matter is a negative charge against centripetal acceleration; but the universe is not expanding or it can be said that there is an upper expansion limit.

II. There are also time differences along the centrifugal path; so this also causes movement and can again be seen as expansion.

[8]Actually only after you have compressed the entire mass of the universe back to its original position, more velocity is required, then you need more velocity and thus the work done is moving. The new universe will have more energy as the speed of the work done increases. Even so, if you do not compress the entire mass of the universe, a stretch will occur according to the increase in density, so you will approach this situation somewhat for the densities at the focal points of the universe.

- Each gravitational wave creates a potential difference, and when they intersect, space moves on the condition that thrust is also possible. As matter emerges from this sliding space, matter also moves.
- The speed of light is an acceleration of gravity, but an acceleration limit as gravity is the only source of motion; because light, even if it is not currently in an external gravitational field, *"always falls during its motion in space."* If you create a potential as a wave in space, it will translation on the lower-density, more regular earth path, which is its travel path, and the extinction time is very long.

a. Expansion of the Universe

Theorem *According to Legal Proposition IV, "The field permitting motion of any size has no "midpoint" for any part of it of any size; therefore, the motion, together with the force that causes it, is always circular and accompanied by centripetal acceleration."; in that case,*

- *The energy that the universe gains for 1 second must take place as a potential, stuck in the smallest time when real time occurs.*
- *Along with the centripetal acceleration, only an "expansion" can be mentioned for the formation of the universe.*

I.

Treat L as the distance traveled at which the gravitational force F_G can pull back an accelerated mass and reduce its velocity at the smallest time t as the threshold time value. $F_G L = \frac{m_t v^2}{t}$ for (16) where v is the rate of occurrence and mass $m = \frac{m_t}{t}$, m_t the threshold is the mass value.

$$m_t = \frac{F_G t^2}{v} (\text{Kg}) \tag{16}$$

Mass is $m = \frac{m_t}{t}$; because all the energy that the universe has for 1 second must potentially exist for the smallest time at the beginning of time. All the energy generated during this 1 second can be stacked in this small amount of time. Via (16),

$$t = \sqrt{\frac{m_t v}{F_G}} (\text{s}) \tag{17}$$

it becomes. The minimum length for this period is (18).

$$L = \sqrt{\frac{m_t v^3}{F_G}} (\text{m}) \tag{18}$$

The mass specified above as (16) is the mass that does not turn off the light at the minimum threshold time. When this mass completes its movement for the same radius for 1 second, it has a mass size of $m = \frac{F_G}{v}$ (Kgs). The force caused by the centrifugal acceleration due to this mass is F_C for radius r = L/C, where L (18) and C is a factor with respect to the circumference at the smallest distance on Cr since it is a closed curve. The distance traveled is $x = a = c^2/r$ where c is the speed of light for 1 second; so if the centrifugal force acceleration a_C for the distance traveled, this is also the radius of the developing universe without particles. Due to this force, a strong vacuum field arises. The universe uses its own heat to do work; therefore it also loses heat during this work; Therefore, space is always cold. Since the speed of light makes the universe stagnant, it only performs the act of appearing and the universe does not expand after 1 second of expansion.[9]

II.

Since all movements can take place as much as the total energy of the universe or the material used, according to the movement made in the direction of centrifugal acceleration, the mass resulting from this movement becomes (19),

$$m_U = \frac{F_C a_C}{v^2} (\text{Kgs}) \tag{19}$$

where v is the rate of occurrence. The density of the universe would also be (20).

$$d_U = \frac{F_C a_C}{V_U v^2} (\text{Kgs/m}^3) \tag{20}$$

[9]The particles contained in space, and therefore the matter, expand a little as they lose their vibration amplitude due to frictions; but it definitely has an upper limit according to the values of the work that makes up the universe.

Warning *Here V_U is the volume of the universe; but the universe reaches this volume only when the particles evaporate, that is, when their vibrations are extinguished in time by friction caused by space or an external influence. Otherwise it just looks like it's expanding.*[*a*]

[*a*]Since matter emerges in absolute space with infinite time differences, since the exit and outer space motion are considered together, if it takes extra space during emergence, it can go relatively faster than the rate of formation, even if the current speed is constant. This is because of space tension. In this way, the universe was able to expand faster than light for 1 second at the beginning of time. All possible distances are referenced at the smallest time and smallest singularity point.

III.

For a particle or wave[10] in empty space, the distance traveled per second should be $2\pi r = ct$. For $t = 1$ seconds it should be $r = c/2\pi$. During the work, the photon behaves like a particle when the radius $r = c/2\pi$ is accepted as the radius of free movement, and the photon has the same values as it generates for 1 second in each work. The scanned area should be (21) for πr^2.

$$A = c^2/4\pi \ (m^2) \tag{21}$$

Since e (Js) appeared in 1 second, the energy density in this area is (22).

$$d_e = 4\pi e/c^2 \ (Js/m^2) \tag{22}$$

It is assumed that the energy e satisfies this equation for 1 m^2. Energy produced in 1 dimension for 1 meter in 1 second $\sqrt{d_e}$ (Js); therefore $e = \sqrt{d_e}/c$ (Js) will be (23) for every distance traveled at the speed of light c.

$$E = 4\pi/c^4 \ (Js) \tag{23}$$

This is the required Planck constant, with an acceptable close value. This is the total energy for 1 second of the fundamental wave of creation, called a photon with a frequency of 1 Hertz. The mass that generates this energy becomes (24) for e/c^2 (Kgs).

$$m_{ph} = 4\pi/c^6 \ (Kgs) \tag{24}$$

This is the photon mass, which we can abbreviate as m_{ph}. This is the mass that can be formed in only 1 second, so when it collides with an object, a total mass effect occurs after 1 second; so the wave can only be a sequence. The force causing this mass will be $f = ma = mv$ for 1 second; For this reason

$$F = 4\pi/c^5 \ (Kgs) \tag{25}$$

it becomes.

IV.

Likewise, on the assumption of perfect circular motion, to calculate the extreme state values of the universe with these, let's assume the distance at which the gravitational force of x, the force F, can pull back an accelerated mass and reduce velocity. The velocity of the mass in t time. For $m^2Gx/x^2 = mv^2$ it would be $v = \sqrt{mG/x}$. For $x = vt$, c is the speed of light and t is the smallest time that allows this work; then it would be $c = \sqrt{mG/ct}$. Here, if c, t, and hence m are constant as required by uncertainty, then G must be constant too. With t, the total mass of the universe for this small escape time will be (26).

$$m = tc^3/G \ (Kg) \tag{26}$$

The frequency of this mass will be 1/t for this time. [11]

For $m_{ph} = 4\pi/c^6$ (Kgs) and $m_{ph} = t^2c^3/G$, the Planck time is (27).

$$t = \sqrt{4\pi G/c^9} \ (s) \tag{27}$$

The Planck length for this period will be (28).

$$L = \sqrt{4\pi G/c^7} \ (m) \tag{28}$$

[10]The fundamental wave that creates photons or particles or moves freely in space does not draw a perfect circle or sphere. Conservation of momentum and energy equations do not allow this. Even so, assuming it's a perfect circle, there will actually be a small difference, to better understand the actual measurements, we can do some calculations that aren't so perfect.

[11]Formation is not just for 1 second for the beginning of time. After 1 second, the photon mass should form a black hole for 1 second, or again, a vacuum density should allow the photon to travel at the speed of light, according to the rule of photon mass formation for 1 second. It is a must because of the conservation of mass and energy. All the energy that the universe has should potentially exist for 1 Planck time at the beginning of time. All the energy generated during this 1 second has to be crammed into this little time as said. The frequency is therefore initially $1/t^2$. Decreases after 1 second and becomes 1/t

The resulting constants can be found with the desired setting. The mass indicated above as (26) is the mass that does not allow the light to go out in 1 Planck time. When this mass completes its 1 second movement for the same radius, it has a mass size of $m = c^3/G$ (Kgs). The force caused by the centrifugal acceleration due to this mass will be (29) as follows.

$$F = \sqrt{\pi c^{17}/G^3} \text{ (Kgs)} \qquad (29)$$

Here $r = L/2\pi$ (m) is for 1 second. Due to this force, a strong vacuum field arises. The universe uses its own heat for work; therefore it also loses heat during this work; Therefore, space is always cold. The resulting acceleration for this force will be (30) for $a = c^2/r$.

$$a = \sqrt{c^{11}/4\pi G} \text{ (m/s}^2\text{)} \qquad (30)$$

According to $x = at^2$, the path followed for 1 second reference time would be (31) as follows.

$$x = \sqrt{c^{11}/4\pi G} \text{ (m)} \qquad (31)$$

This is the radius of the universe. Since the speed of light makes the universe stable for higher values, it only performs the act of appearing and the universe does not expand after 1 second of expansion. Since all processes can take place as much as the total energy of the universe or the material used; According to the movement in the direction of centrifugal acceleration, the mass resulting from this movement will be (32).

$$m = c^{12}/2G^2 \text{ (Kgs)} \qquad (32)$$

It can be said that for such a large mass, quite absurd physical events can occur in the universe and that they can occur anywhere every second, depending on the total number of particles that emerge. The density of the universe will be (33).

$$d = \sqrt{9\pi/Gc^9} \text{ (Kgs/m}^3\text{)} \qquad (33)$$

The universe can have this density only when all the particles of the universe have evaporated. The universe has a center and the distribution cannot be homogeneous and will not be due to time differences. Irregularity always prevails.[12]

As you can see, the universe has a center, and what appears to be expanding is that the photons that make up the particles decrease in vibration amplitude and lose mass. As the universe arises due to centrifugal force, its radius changes due to evaporation of particles.

During expansion, a potential difference may arise across the gap in the direction of the centrifugal acceleration due to the initial motion, and the masses move with the momentum of the photons due to the friction of the photons forming them with space. Matter's own movement of creation causes movement in space by friction. It's also part of gravity.[13]

While the universe emerged with the centrifugal force, a vacuum can be seen at some points in space due to mass distribution. These points are more intense. If we look at the information, it can be said that the waves intertwine to form subatomic particles, and then with a neglected time difference, hydrogen or perhaps different unknown atoms, which we cannot reach them due to mass scattering; so it is not so difficult for particles to spread in the universe in 1 second. All work together and in 1 second. If many masses are passing through the same point at the same time, space must collapse and then swell, and gravity will hold them together; so that new types of elements can be made by photon-photon collisions and don't have to be like in our scientific knowledge. Supercomputers will be the savior to do this.

[12]These features can be effective in red giants. Since space can bend, they cannot prevent inflation unless there will be enough gravity holding the mass at the expense of space bending. Considering the objects that move freely in the environment with low gravitational effect alone, they are affected excessively since there is no external supporting gravitational force. Even if you think there is only 1 particle in the universe, because of its existence or non-observational inner space creation motion is actually the same as observational space motion, it will move according to the rotation of the universe. ; because being one of them before or after the same work Ft changes the displacement for +Ft and –Ft. According to the initial motion of the universe, due to the frequency of its occurrence in vacuum, the particle will move with acceleration as it experiences a constant potential difference in space over time. He always looks for a neat space but can't find it. It never stops.

[13]The phenomenon Einstein calls the "distant ghost effect" is caused by the $1/t^2$ Hertz frequency at the beginning of time, or the behavior of the universe after expansion for 1 second 1/t Hertz. The universe has a spin. Since the universe does not differ for a particle, it can almost simultaneously touch all the masses it contains with a small time difference from the furthest distance that exists. The difference between the two furthest distances is 1 second.

b. Mass Capacitance of Space

Theorem *Matter is waves formed through space. When an object moves from point A to point B in space, it means that the motion is moving because the work that creates the object and gives it energy is done every second. Matter is not at rest, even when it is already observed, and always moves at the speed of light.*

Empty space, on the other hand, has the capacity to hold a "frequency" for the masses it can contain in each cubic meter, since it exists with a frequency due to sequential formation. As we get closer to the times when space is not there, the resistance of space to motion increases.

I.

Empty space is capable of holding a "frequency" per cubic meter, as it exists with a frequency due to sequential formation; therefore, the initial velocities of moving bodies directly affect their observational outer space constant velocity. How many cubic meters per second they scan, it's important. Also their mass and density are important for this drawing. The resistance they experience varies according to these properties.[14]

The rotation of the universe is also very important; because it can cause deflection in moving objects, as well as cause resistance or acceleration.

II.

Some properties of the universe were inferred from the speed of light and centrifugal force at the beginning of time.[15] Based on these calculations, the holding capacity of 1 cubic meter C is equal to the following formula,

$$C = \frac{3c\sqrt{2\pi cG}}{4\pi G^2} \text{ (Hertz)} \qquad (34)$$

c is the speed of light and G is the gravitational constant. Almost $5.7 \cdot 10^{28}$ Hertz. For $hf = m_e c^2$, where m_e is the mass of an electron, h is Planck's constant, and f is the electron's frequency, and c is the speed of light; this means that the electron has a frequency of about $1.22 \cdot 10^{20}$ Hertz. This means that 1 cubic meter of space can only hold about $5 \cdot 10^8$ electrons that means it can hold a mass of about $d_s = 4.5 \cdot 10^{-22}\,\text{kg/m}^3$.

Pioneer Anomaly

Since the same principle applies to calculations in space, the buoyancy equation of liquids can be used.

$$F_l = V_s \cdot d_l \cdot g$$

Here, F_l buoyancy force, V_s submerged volume and d_l density of fluid, g acceleration due to gravity; This acceleration is

$$\Delta x \Delta p \geq h/2$$

equal to the speed of light in 1 second, since gravity is the main and only cause of motion through the Heisenberg's uncertainty equation; because the equation interprets the change in gravitational potential, via $ma_o = V_s \cdot d_s \cdot c$, it becomes

$$ma_o = V_s \cdot 1.35 \cdot 10^{-13} \qquad (35)$$

Here $F_l = ma_o$, m is the mass of an object in empty space far enough from a gravitational field, and a_o is the observational space acceleration different from the rate of formation of gravity because the motion of outer space and inner space are the same.

The movement of outer and inner space, that is, the observable movement, and the formation movement, which is repeated every second, occur together

[14]This means that different intensities of light of the same frequency or of different frequencies also have different behavior in space. It would be misleading to do the same calculation for different approaching lights of stars of different sizes. Even the amount of redshift is different for more intense light or lower intensity light or light of different frequency.

[15]Acknowledge that the motion is not actually a full circle and there will be some differences such as radius or volume. I used a slightly different calculation for Planck's constant, Planck length, and photon mass. The results will vary by some amounts that are not very different.

[16]These calculations are for the macrocosm to set a reference; in other words, you cannot say that the mass distribution in 1 cubic meter is not important for the microcosm. Likewise, you have to calculate each cubic meter of an object separately. So you have to use aerodynamics. For example, one wing of a satellite can lift the vehicle while leaving the other wing. You must calculate based on the geometry placed on each cubic meter of existing space object.

by using the same space at the same time; when an object moves from A to B, the resulting motion has moved, where c is the speed of light as the acceleration of gravity over v=at for 1 second because gravity is the source of the velocity of appearance for any wave or particle, and hence the total energy.[16]

As a result, the acceleration or deceleration relative to the rotation for a 1 ton object with a volume of 10 cubic meters becomes:

$$a_o = 1.35 \cdot 10^{-15}\ \mathrm{m/s^2} \tag{36}$$

Alright; however, we did not include the initial velocity as it scans more volume than initial velocity. Assuming this object is moving at 10 kilometers per second, for $V_s \cdot 10,000$ it becomes:

$$a_o = 1.35 \cdot 10^{-11}\ \mathrm{m/s^2} \tag{37}$$

This may explain[17] the Pioneer Anomaly.[18] Here the electron is just a reference. You can use any particle to determine this. This won't change anything.

Inferences

The (19) and (34) equations bring together some results in physics. These are some inferences that support the above propositions about the nature of motion and the formation of gravity, and they are as follows.

I. Each gravitational wave creates a potential difference, and when they intersect, space moves on the condition that thrust is also possible. As matter emerges from this sliding space, matter also moves.

The speed of light is an acceleration of gravity, but an acceleration limit as gravity is the only source of motion; for light always falls during its movement in space, even if it is not in an external gravitational field at that moment. If you create a potential as a wave in space, it will translate in a lower-density, more regular ground path, which is its travel path, and the extinction time is very long.

II. The universe gets its volume due to centrifugal force, since only circular motion is possible; however, the volume changes according to the amount of particles produced. If the particles lose their amplitude over time, in other words, if they evaporate, their vibrations decrease according to entropy, and their volume increases. It also makes the universe appear to be expanding with the matter on it; because the amount of matter is a negative charge against centripetal acceleration; but the universe is not expanding or it can be said that there is an upper expansion limit.

There are also time differences along the centrifugal path; so this also causes movement and can again be seen as expansion.

III. Matter is waves formed through space. When an object moves from point A to point B in space, it means that the motion is moving because the work that creates the object and gives it energy is done every second. Matter is not at rest, even when it is already observed, and always moves at the speed of light.

Empty space, on the other hand, has the capacity to hold a "frequency" for the masses it can contain in each cubic meter, since it exists with a frequency due to sequential formation. As we get closer to the times when space is not there, the resistance of space to motion increases.

Eppur si muove

15.06.2023

[17]The magnitude of the Pioneer effect is $(8.74 \mp 1.33) \cdot 10^{-10}\ \mathrm{m/s^2}$, approximately equal to the product of the speed of light and the Hubble constant. Greater than the value I found; but I assumed that no mass was formed and a less dense universe than in practice. Therefore, this value will be approached.
[18]Also, for example, galaxies with lower mass magnitudes can spin at higher speeds than heavier ones.