

## *Original Paper*

# The Universe is Otherwise—5/26 Edition

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Received: May 26, 2021

Accepted: June 5, 2021

Online Published: June 12, 2021

doi:10.22158/wjssr.v8n3p1

URL: <http://dx.doi.org/10.22158/wjssr.v8n3p1>

### ***Abstract***

*There are significant issues when defining the universe. Original theories over time were limited and led to mistakes under more detailed investigation. The components of early models remain and misdirect our ongoing understanding of the Universe. This leads to today's questionable cosmology. The current cosmology is called the standard model.*

### ***Keywords***

*External Gravity, Revolution, Rotation, the Universe, Light/EM radiation, Electrons, Black Holes, Infinity, Matter, Magnetism, Spectrum, Kepler*

### ***Introduction***

Gravity is a key component for understanding the universe.

Gravity is one issue that had confused scientists for centuries. Focusing on “External Gravity” is one of a series of revelations that can lead thought toward a complete rewrite of cosmology.

This paper corrects the nature of gravity and thus of the universe.

Everything science knows or analyzes has a foundation of all previous knowledge. You pick the relevant factors and disregard the rest. What makes factors relevant? The components may vary when the environment being considered varies. We too often retain only the original components.

An extreme example of expanded environment is extending of local actions across space. Our science ideas may change when viewed under further expanded environments. The reality is we have ignored the most obvious oversights by science for the last century. We have accepted old gravity ideas!

Gravity local to earth and the solar system is the basis of our picture of the universe. Some theorists claim gravity is different elsewhere but modifying the function itself has no proven basis. We aren't reviewing dark matter here. Instead, we find that science ignores gravity entirely in regard to the flow of EM radiation when defining the picture of the universe. Matter is subject to gravity but radiation beams were categorized as void of matter. Reality is that anything that can move is subject to gravity.

Thus, light radiation must be subject to gravity. This is supported by the fact that light and other radiation have been found to cause impact upon arrival. Locally scientists have recognized and used the gravity effects on light. But when discussing the speed of light any gravity effect is considered trivial. The problem is that over extensive time the summation of gravity effects will affect the speed of light. Cosmology theory has not updated the picture of the universe, assuming the gravity effects are too miniscule.

Reality has to be that gravitation from a source body gradually diminishes the departing velocity of light in summation over a long period of time. Meanwhile the gravitation of the destination body gradually increases the velocity of incoming light over a long period of time. A net result will be incoming light traveling at nearly the same speed as its original speed. The period of time, in which the gravitation acts, determines numerous facts about the structure of space. The gravitational pull by the destination body that I discuss here is confirmed by the well known Pound Rebka experiment in which a beam of light was sent from an orbiting rocket downward to earth. The result was a blue shift of the light beam observed on earth which equals the idea that the beam was moving faster at the surface than it was in the orbit.

This paper was built around the effect of gravity on light. The major revelation and explanations of a pushing gravity and the structure of space that make up 'The Universe is Otherwise' were added later because they are the cosmology. You may find the next few paragraphs difficult until you get to the numbered issues of understanding the universe differently.

Continuing; A beam of light travels from 1 sun/star to another, while slowing until half way by  $1/r^2$  is partly offset by the similar pull during the arrival portion. Mathematically the given speeds matter as the slowing of the faster speed will exceed the accelerating of the slower speed in the second half. This yields a slight net red shift. Actually, I have been positive that my system is the proper correction to light redshift for a long time.

So, my model relies on both the source and the destination. Besides that, the relative distances to source and destination also apply in a way that simulates an aether effect. However, my system refutes any aether. EM radiation, which is everywhere, defines the nature of space within the universe. The radiation is our actual "pushing gravity".

Consider now other issues such as our reliance on a constant  $c$  for light speed.

Regarding current theory:

Einstein's analysis, as stated in the paper, hangs on just 2 **postulates** (verbatim from the 1905 paper): 1) the same laws of electrodynamics and optics will be valid for all frames of reference for which the equations of mechanics hold good; and 2) light is always propagated in empty space with a definite velocity  $c$  which is independent of the state of motion of the emitting body.

Newton needed empty space to eliminate any friction.

The problem for both Newton and for Relativity is that space is not empty! This statement defeats all systems relying on fixed—constant concepts. The 2 postulates above, as written, are ok, especially in our lateral equilibrium, but it identifies propagated speed but does not even suggest that the velocity will continue at that speed  $c$ . So many theories rely on that continuation. If we fall back on the word empty suggesting an eternal equilibrium in space, I object and claim that whatever causes gravity will affect the ongoing velocity. Regarding the statement independent of the state of motion of the emitting body, which works for motion within equilibriums. But if your light accelerates up and into a net downward pushing gravity, the light velocity you send will differ from  $c$ . Gravity is its own type of friction. This issue stands even for readers that don't follow my pushing gravity.

I find that the concept “inertial frame” confuses understanding. It makes people draw all these boxes to separate pairs of participants such as origin from recipient. The differences between individual frames are best understood as the net gravitation between two locations.

Do you want answers that support an external gravity idea? To do so we must revisit many “facts” of the universe. There is much to discuss or debate.

**Correcting issues to understand the universe differently.**

- 1) Expansion theory comes from applying Doppler motion away by all bodies. The basis is duplicating the decreasing sound of departing trains with a decreasing frequency of waves for light. That gives a redshift supposedly due to motion away. The redshift used there is also caused from relative sideways (perpendicular) motion. So, the impractical choice of redshift caused by motion away is—choosing the unmeasurable nor visible speculative cause over the obvious visible relative rotation cause.
- 2) The universe is infinite. The big bang idea is for playing, not for understanding.
- 3) Extra dimensions are further imagination play. Too many models are metaphysics.
- 4) Space has a real nature, and that nature is EM radiation. All debate of radiation's nature between wave and matter succumbs to “radiation moves”. Anything that moves causes pressure.
- 5) Newton's empty space and singular (flowing out from matter) direction of gravity is poor. It requires other infinite sideways motion thus ignoring the need for some drive source. And Newton's deduces that gravity is significantly caused by matter.
- 6) Gravity is real and pushes rather than attracts. Note, pull is not a physics function. The push is from EM radiation and that is the source of gravity.
- 7) Gravity push comes from all X Y Z directions, even holding all things together. The “attraction” we experience on earth is the push of incoming gravity beams being offset by diminished beams exiting upward from the matter.
- 8) Thus EM radiation penetrates matter. Matter affects penetrated radiation by diminishing its energy into heat and light. The matter also applies its rotation of the sphere to the exiting beams of

radiation. Local space gains a swirl due to the rotation of earth. Also, the maximum heat is generated at the surface where the incoming and exiting waves are most different. This has been learned at the sun.

9) Space around a globe is swirling due to the sphere rotation. That swirl causes pressure on orbitals and pushes them in their orbit.

10) The atmospheres of two rotating stars push each other and the stars then rotate around the central point called a barycenter. For many/millions of stars the central point is a galaxy center. That center exhibits the sum of many swirls of all the stars. Being all swirl rather than being matter, the center gives the impression of a black hole when viewed from the equatorial plane of the swirls. Note few swirls distort that space when seen from the z axis.

11) Light radiated from a body is affected, slowed by gravity throughout its travel, such that some redshift is gravitationally caused. A receiving body subsequently offsets it somewhat with its blue shift.

Further observations

1) Magnetism is the result of some gravity beams being redirected, usually by 90 degrees. An electromagnet gives an example as activated electrons push incoming gravity beams sideways in the direction of the electricity, causing 90 degree bending of the gravity beams. More push collects at one end of the magnet while less gravity beams and thus less pressure reside at the other end.

2) Since gravity beams can be redirected and offset each other then some of the action can appear as anti-gravity, i.e., blocking gravity in some direction.

3) Electrons of atomic matter are simply the intersecting of the waves of oppositely directed gravity beams. That crossing begins the creation of matter. Protons and neutrons are regions where the charge depends on the relationship to the electron crossing.

4) Matter is continuously created as incoming EM beams intersect existing waves of initial matter in an atmosphere. The closer to the sphere the more crossings occur.

5) The EM spectrum becomes a spectrum of existence with long wave beams provide the force of gravity while short length waves interact, leading to matter as crossings serving as electrons become included.

6) Kepler's third law is not a mathematical function as the point of relation is not a numerical component within the relationships. Nothing about the sun actions provide a cause. The missing idea is that the rotations near the sun are one direction due to its rotation while more distant revolutions are in the opposite direction. A solution is that the geosynchronous type point for whatever central body is used. The relative distances then match up to that point and the distance for the synchronous point for the sun should be at about 11 diameters.

## Models

Going forward leads to examining in detail some of the implications of each new idea here. I have done that in many papers. One of those projects led me to redefine galaxies and many of its forms. The follow up here leads to one of those ideas:

### The Laws of Motion

Rotations, Revolutions and Apparent Motions of Heavenly Bodies:

Summarizing my views of galaxies suggests outlining a preliminary set of motion laws, and corollaries. First recall there was the Copernican revolution which ended the Ptolemaic, Earth centered and the sun revolving, view of the universe. Earth centric theory did work with sub orbitals, but the new sun centered model requires less adjustments. Are the two theories, revolution vs rotation in two body systems interchangeable? Impressions are that it is the outside issues from which one decides what is right.

#### Revolution vs Rotation

That the planets most logically orbit the sun is what led Copernicus to propose the sun centric system. But given enough subsystems, could we go back to earth centric system? There is even a third workable two body system in which earth circles the sun daily.

It takes the Paep (early particle of External Gravity) pushing gravity systems with pushing particles providing gravity to lock in the sun centric system. Gravity particles then become the outside component, like planets, that define the center.

#### A. The relativity of rotation

Law 1.

Rotation and revolution are interchangeable concepts between two bodies in a vacuum when they are in relative motion while retaining the same distance. Neither is a privileged non-rotating or stationary body.

Corollary 1.

Specifying rotation vs revolution motion depends upon our determination of apparent motions of other relevant bodies

Rotation 2

Corollary 2.

Specifying rotation vs revolution may alter if a determination of other relative motions is changed. For example, ignoring other motions allows converting the Copernican revolution, in which earth revolves counterclockwise around the sun, back to the sun circling the earth.

Rotation 3 Are rotation and revolution interchangeable as Law 1 claims?

Law 2.

Paep gravity particles are the “other relevant motion” negating law 1.

### Law 3.

Specifying the nature of spatial motion is deeded to an outside observer stationed, or imagined to be, north of the defined platform/plane containing the motions. A participating observer makes assumptions by becoming a virtual outside observer in order to theorize the nature of motions.

### Law 4.

Orbital directions in space may be labeled clockwise or counterclockwise relative to an outside observer. That corresponds to our usual view of earth's activities from the north Z axis. All larger planes such as the ecliptic and galaxy planes have a Z axis whose north is "by definition" within 90 degrees of earth's north. So all revolutions are counterclockwise relative to us.

## **B. "Otherwise" Laws of Space**

### Law 1

Space serves as the container for substance and provides the forces which create motion among the substances. Space provides the gravitational mechanism we call attraction. Space, distorted by rotating mass, provides the "drive motive" which offsets the attraction force by providing the rotational impetus for motion.

### Corollary 1

Rotations within space insure continual separation of bodies.

### Corollary 2.

There is no absolute vacuum region, as suggested by Newton, where motion continues for lack of potential interference such as friction. Such a void would not exist as space nor have dimension.

### Corollary 3.

Two bodies in space neither collide nor separate permanently because of the way their relative rotations modify space locally.

### Law 2 of Space

Any spatial body, such as the sun, serving as the center, and being the cause of revolution for other bodies/orbitals, is likewise influenced by each orbital and attempts to revolve around the orbital. The small quantity of force generated, along with the motion of the orbital results in the suns motion is almost trivial and approximates rotation rather than revolution. The related force calculations upon the sun and upon the planets are separate and result in a barycenter of gravity around which each body revolves.

### Corollary 1.

Most centers of gravity lie within the sun for our solar system because of the extreme differences in size. The multiple centers each form a rotation center for the sun.

### Law 3 of Space

The more equal in size two masses are, the more central is their theoretical revolution point. Given two

equal masses, each mass serves as origin to a revolving coordinate system of which the other body is a part. The revolution periods are  $\frac{1}{4}$  or less of that determined by Kepler's formula. Choosing which mass to consider as the center of revolution is optional.

Corollary 1.

Two bodies revolving around a central point provide optional views of relative revolution. One body may be thought of as stationary in which case the center of mass and the other body revolve around it, both in the same time period. Equivalently one body may be stationary and rotate such that the other body and the center of mass are stationary relative to it. The relative action of outside bodies determines which motions are assumed.

Law 4 of Space

When equal sized adjacent bodies are rotating in similar directions, their rotations drive each other into orbital motions.

Corollary 1.

A body #2, orbiting another and approaching others may be driven and passed from one orbital center to the next rather than completing its original orbit. The more bodies supplying the drive, the more linear becomes the appearance of body 2's line of passage.

Law 5 of space

Were there 2 adjacent bodies rotating oppositely (clockwise vs counterclockwise) along a common plane, they would push each other in the same linear direction and create swirls that violate the continuation of separation. Picture them occupying 2 ends of a figure U, moving down together, and eventually colliding at the bottom center.

Corollary 1.

Opposite rotation can occur in a plane only when radial separation of the orbitals is immense. Overlapping push causes turbulence that leads to inclined orbits. Collisions are avoided throughout space

Law 6 of Space

If body 1, originally driven by body 2, passes between body 2 and a body 3, the body 1 orbital must follow an inclined path to avoid the center of revolution vortex and to avoid body 3.

Law 7 of Space

Assume all equal sized bodies in a group are rotating counterclockwise. An outside or a participating observer will determine that all bodies are revolving relative to their adjacent bodies. The relative revolutions along a line of bodies are cumulative so that the farther the observer looks in any direction; the more rapid the orbital motions of their circumferences measure relative to him.

Corollary 1.

Apparent linear motion velocity depends on the angular motion of the line of sight. Apparent velocity

of distant bodies increases up to 90 degrees of cumulative angles of revolution. Higher angles curve motion back toward the observer, limiting the apparent speed and ultimately the distance of separation between observer and target.

#### Law 8 of Space

It is the spin of a central body that determines the action and existence of its orbitals. The quantity of effect varies with the tilt of the orbital plane. The maximum rate of spin occurs at the equator and diminishes as you approach its poles.

#### Corollary 1.

In the solar system, most orbital bodies exist near the ecliptic, on the spin line of the sun, because that is where the sun supports them by its maximum rotation velocity.

#### Law 9

Orbits are elliptical rather than circular because there is a secondary force of attraction centered at a second focus which represents the summary influence of all outside forces.

#### Corollary 1.

The real body being orbited supplies the revolution impetus. The secondary/imaginary focus provides no revolution impetus and interferes with the ongoing revolution. That causes an orbital to redirect toward perigee, incur less swirling and lose some of its forward motion pressure.

### **C. Laws of motions within galaxies**

#### Galaxy Law 1.

A series of equally spaced stars in a line, rotating counterclockwise, will each swirl their adjacent star into orbit so that the line may gradually bend to the left. The bending establishes the apparent speed of rotational motion. Observers will view a nearby rotating body as revolving and will calculate that more distant bodies in linear sequence move faster. The relative revolutions add up. The maximum linear speed occurs when the revolution angles sum to 90 degrees.

#### Galaxy Law 2

Bent lines of stars form arms and stars far from a galaxy center become arm ends. As the angle of bending approaches or exceeds 90 degrees at arms end, the distant stars apparent motion will either: 1. Appear about to escape. 2. Achieve the exact velocity to continue orbiting the galaxy center. 3. Further increase the angle thus falling back toward the galaxy center.

The actual motion depends on the length of the arm, the distance of adjacent stars and the stellar concentration within the center and within the arm.

#### Galaxy Law 2 Corollaries

Corollary 1. Fall back/returning stars, in arms which bend 180 degrees, will probably not complete orbiting their neighbor nor pass between two stars. They will be passed from one mainline star's control to another and "slide" along the bottom of the arm.



Corollary 2. A dense bunch of stars will bend an arm more than a sparse region does. Stars sufficiently departed from dense regions have a linear motion which reduces the bending relative to the center.

#### Galaxy Law 3

The gravitational retention and the velocity of an orbital depend on the rotation speed of a dense galaxy center. Rotation speed is maximum at the equator and lesser at higher latitudes. The greater the angle above or below the galaxy disk, the less the center will retain lines of orbitals. The shortened lines will suggest a dome above and below the center.

#### Galaxy Law 4

Orbits of stars near the galaxy center or a cluster center are tilted relative to the disk of the galaxy. The highest declinations occur nearest the galaxy center. They display polar regions to the galaxy plane presenting a different look. Therefore, they appear different, giving us the impression of being older stars.

#### Corollary 1.

Stars along the galaxy disk rotate approximately in our plane so their makeup appears similar to our sun. We see their brightness and call them younger.

#### Galaxy Law 4

The rotations of the stars produce a spinning of the EM beams that make up the nature of space. Enough spin creates black star impressions. Therefore, much of the activity focused on centers expands the appearance of stars and bodies.

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