Gravity from the Ground Up

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This paper follows the history of gravity toward a new perspective. Gravity is viewed as beams, moving throughout and defining space. These external gravity beams apply pressure to masses, are diminished while penetrating masses, and provide the net pressure that we call attraction. A key concept is that beams are bent by the rotation of masses from which they exit. The bending allows explanations of orbiting, curvature, mass creation, magnetism, forces and numerous other phenomena. Curvature and inertia become basic concepts of this perspective and require different laws to properly relate the perspectives and motions. Among the applications presented are new understandings of some spacecraft anomalies, where current theory doesn't properly explain the motions.

1. Introduction

My father once told me "you can't get down off of the horse". Parents like to tell kids what they can and can't do. So, I protested, "why can't I get down off the horse"? My father responded "you can't get down off a horse because down comes from geese". Terminology, a key to knowledge, is subject to certain issues such as multiple definitions. For science, other issues include the measure of the term and the perspective. The need to measure applies for concepts such as time, length, etc.. We have standards of measure and keep close attention to them via a bureau of standards. The more obscure issue is that of perspective. Consider motion. We expect it occurs when we use energy to relocate relative to our surroundings or when something else has energy such as wind etc. Without the expected sensory feelings, it is easy to understand that ancients didn't believe the earth moved. Its motion follows none of the rules and in fact doesn't move relative to us. That is a perspective. In order to accept the earth moving you need to think like a person on the sun. This need for perspective is one way to answer the null results of the Michelson Morley tests in which light beams didn't reveal an acknowledgment of the motions of earth.

2. From 'Down' to Gravity

'Down' is a key concept in the history of our knowledge. It has no measure standard but is dependant upon perspective. Down is one leg of the 3 dimension axis along with up, front, back, left, and right. As we begin an overview, the direction of down displays qualities and seems natural. Down has this property that it attracts and retains things. Everything on earth seems to follow its rules. What really bothered thinkers was why the sun, moon, and stars disobeyed the rules of 'down'. They stay up all the time. It became the definition of the world that the earth is down and the heavens are up.

Clearly we all know what down is, and early on mankind needed measures relating to it. The key concept became weight. Weight is how intensely we go or stay down. It has some approximate connections to size.

Early mankind initially believed that earth's surface, which endows the concept of down, was like a flat board. Subsequent analysis of the surface, and of earth's curved shadows on the moon during lunar eclipses, suggested very long range curvature. It took much of the history of man to realize that the earth is a sphere.

What the heck is down relative to a sphere? Turns out the direction of down varies depending on position and perspective. People on the opposite side of earth, who are upside down to you, recognize down locally toward the surface even though their down is up toward us. Beyond that is the fact that the sun, moon, and stars are sometimes down and sometimes up. Mankind needed gods to maneuver around this complication.

Experimentation showed that proximity to the surface played a part in velocity downward. But soon, without a flat surface for boats and things to fall off from, it was no longer clear why 'down' worked. Why does 'down' seem the same to everyone on the sphere?

In this more complex universal situation, 'down' needed more definition and more detailed attributes. Along came gravity to carry the fight forward. It became the 'something' that kept us and our things fixed to the surface, and its vicinity. Mankind likes to contemplate things so we devised numbers and math to measure such things as motions and velocities. Their numerical values serve as our knowledge base. So the 'down' mechanism became gravity. Definitions for gravity included a measure of its effect on velocity and its direction, which is toward the center of earth.

In the heavens, with down and up becoming spherical concepts, the locations of things need to be drawn as rings and separated somehow. The question then arises 'what is up and what is down overall?' How do we learn how the earthly sphere we live on relates to the space around us and to other heavenly bodies? What keeps the earth up, i.e. from falling down to somewhere? I think Atlas used to handle this job.

As long as earth's surface identified down, there remained a safe haven for logic. Even when the earth was found spherical, all was well as earth was the center of the universe, and naturally all relative motions would center upon her. The sun, and moon, stars, and the newly understood planets would center upon earth or circle around her.

The applecart collapsed with the revelation by Copernicus that the earth moved around the sun. Scientific understanding of motion required multiple perspectives to recognize motion when none is felt. Likewise, absolute down was no more. Things got so

bad that believers of earth's motions, such as Galileo, ended up in jail. It didn't matter that Galileo contributed so much, such as proving that size didn't matter for gravitational velocity even though size greatly affected the push called weight.

Gravity pulls things down and can make apples fall on the head of people like Newton. Since gravity pulls things down it became labeled an attraction. We now call gravity a force. Since it aims toward the center of earth we call its actions a centripetal force. So all those things that are up in space actually obey the rules of 'down'. But they just don't actually come down. They retain their distances, seemingly forever. The things that are up, and stay up, are able to offset the pull of gravity by moving away or to the side. In fact, those motions have to be how the universe can continue to exist in the face of gravity. We have yet to contemplate the sufficiency of applying 2 perpendicular controlling functions to explain all things about space.

In the solar system the motions vary appropriately and follow a pattern discovered by Kepler. Consider all the things that are up, and imagine them all moving at different rates relative to the central source. Fortunately gravity varies by distance so some motions could have the same speed while at different distances or in different directions. These motion velocities were collected by Tycho Brahe and analyzed by Kepler. They were ultimately connected to gravity distances by Newton. Considering all the items in space there must be nearly an infinite number of velocities. Plus, each body is a center to each other body which squares the number of relative motions needed. Relationships sure can be complex.

Gravity as our 'base concept' has a fixed measure constant derived from; all points on the surface of earth experiencing similar gravity force. This is because all points are equal distance from the attraction point at the center.

But now that we find gravity acting throughout space and not just on earth. Our perspective is changing and revealing that we have misunderstood gravity. Born from 'down', it seems to be an attraction, but when related to overall space it's conceptual being is a push downward toward all mass centers throughout space. It is long overdue for us to begin to understand gravity this way, from this perspective. You see, what has happened, as Newton focused on gravity acting in space he lost any mechanism by which it could attract. Soon the force of gravity became recognized as 'action at a distance' and lost any physical attribute. Physics studies interactions and they require contact or else the events are metaphysical. If you want gravity to be a physical entity/force, it must be a push.

Beginning with magnetism man saw a mysterious event that didn't seem to involve interactive contact. Gravity didn't either so the two were given the group name of force. In the micro world, structural retention was added to the group. For gravity the force concept was assigned to the linear centripetal line. Forces soon became measurable as the result of change of motion they produced.

Relativity might not have taken hold had it not been an early attempt to provide a physical nature to gravity. The first step was the elimination of any physical form to space (the aether) and replacing it with curvature. Gravity then became known as curvature of space near mass even though space is a rectilinear concept describing the 3 dimensional relationships between physical things. Curvature and multi-dimensions became facets of space rather than measures of what happens within. Curvature of relationships is the underlying nature of actions within space and must be accounted for. Assigning the curvature to space itself has created a lot of strange concepts and bogged down physical understanding.

The science community avoids the fact that Gravity needs revamping and that relativity theory is being challenged. For example, pushing gravity theories are automatically rejected. Admittedly pushing models need some clarification and corrections that are now available via 'The Universe Is Otherwise' and via my more recent papers.

3. Pushing Paeps and 'Net' Pressure

So what is this new gravity model? Imagine gravity as beams of force moving in all directions at velocity *c* in open space. The beams interact with and push upon masses they encounter. Gravity is a pushing pressure of long wave radiation beams moving in all directions and creating the structure of space. As such it has no origin and exists as space independent of matter. Gravity beams push upon matter. Meanwhile the gravity pressure is modified by those masses. The net pressure produces 'attraction gravity'. In addition, orbital motions (inertia), magnetism, the nuclear force, etc. are results of 'net' unbalanced gravity.

Paeps, my name for gravity particles, is an acronym for 'Particles Applying External Pressure'. Paeps exist as one wave of a radiation beam. Paep beams travel at velocity *c*, not specifically because they are radiation, but because they carry and define other radiation. Some pushing gravity models need to assume extreme particle velocities. Subsequent revelations about space will explain why super fast velocity is not necessary for gravity.

Paep beams penetrate, and are diminished/converted by masses. Attraction gravity is the 'net' imbalance of undiminished downward paep streams encountering diminished upward pushing beams which exited from the mass. Attraction gravity is a linear effect. Consider linear gravity lines from all directions converting at one point. The full focused force of all direction gravity will be shown as the nuclear force.

Analyzing the sun serves as one key to how gravity works. The sun gives out, or radiates heat and light. These properties have physical existence. Somehow they are created and move out. Early on these properties were assumed to be chemical reaction output. But nothing seems used up and the sun doesn't get smaller. Then the radiation source became nuclear reactions. But these need instigators. So the ideal answer is that radiation comes out from the sun in response to gravity coming in. My early ideas, and those of others, are that the pushing is done by streams of particles that penetrate masses. But particle interactions build up heat. A clue that the pushing component of gravity can't be particles is that it has to be modified, and its push diminished within masses. This reveals the advantage of radiation over particles. If gravity, instead, comes in as radiation, there can be an inelastic contact modifying everything. The mass is pushed, the gravity is diminished but in total there is an in and out equilibrium. Particle interaction would tend to be elastic and nothing would be netted out. Elastic means that interactions couldn't change the velocity or push of gravity while they were

changing its direction. So gravity is radiation. Penetration of matter works best the more linear the arrow is. Long waves penetrate better than short waves which tend to 'splash' down. Gravity is thus long wave radiation!

Though paep beams are diminished by penetration of masses, one needn't worry about any universal diminishing of pushing gravity or of its force across the universe. Gravity is recycled. Light beams from stars are gradually stretched by simultaneous pull by source and destination bodies. Light stretches to microwaves, as we detect, and ultimately to the longer wave paep beam.

Since penetration of mass affects gravity, we need to specify what mass is. Mass is the existence of spin relative to a local equilibrium of space. The spins of internal components of a body, along with the spin of the body as a whole, taken together, define the density of mass and ultimately the existence of mass. Mass is created by unbalanced intersections of paep waves via the equation $M = E/c^2$. As energy can be released nearly instantaneously from mass, mass is created extremely slowly by the energy accumulation in the reverse of the equation. Then energy is generally a local activity, and the essence of a local activity is motion. In order to remain local, that motion must be rotation or spin. The non-local subset is long range 'energetic' transmissions that contain and carry the local activity internally, usually as potential energy.

A "KEY" revelation of this model is that masses affect gravity in the following way: Gravity, exiting a rotating mass, acquires some of its rotation as it is effectively launched into space. That creates an imbalance in space within which other net gravity differences occur. For example, since the sun rotates counterclockwise, the exiting gravity beams bend to the left and impart an imbalance to orbitals, such as planets, and cause them to revolve around the central body sun. Additionally the bent gravity initiates a rotation within the planets depending on how far from center the bent beams are focused.

Rather than being Newton's 'resistance to a change in motion', inertia ascribed to planets is accommodation of the local net flow of gravity.

We justify here that bending, rather than linear must occur and be included in any analysis Lunched gravity beams bend, in part because there is no 'straight up'. Imagine launching something with moderate speed which continues upward. Does it stay straight up from you? If so it must revolve with earth and bend relative to fixed space and outside observers. Or does it continue straight up from where you were originally? If so, it bends relative to you and all earthly observers.

Another roll played by gravity is the creation of mass. Gravity is the structure of space and can exist as such without any masses. Linear beams with some degree of interference exist as radiation. Thus paep gravity beams may morph into EM radiation. It is significant disturbances and bending of beams within this space structure that lead to mass. Sufficiently bent gravity, and or radiation, beams joining at any point with other beams override the concept of non-interference. Instead of seeming like a void point, there is interaction appearing as tidal action or cyclonic whirling. Such interaction leads to unexpected crossing of gravity beams so that each crossing is an electron point. Further crossings upgrade the region to clusters such as protons and neutrons. The volume of chaos within the disturbed region, caused by curved radiation streams, determines whether many simple or fewer more complex nuclei might be formed.

In addition to addressing curvature within our universe, this model exposes much more when you consider my definition of gravity as beams coming from and pushing from all directions. That means that we on earth incur pressure, not only downward but also from all directions. The sum of all downward pushes includes the straight down portion of those angling downward. These are netted against all upward pushes, including those angling upward. It is the net of all these pushes that gives the gravity constant *G*. So, the constant *G* is partly determined from calculation of the difference between velocities. It nets out a velocity c in one direction and velocity c' in the opposite direction. Recognize also that we incur sideways pressure upon ourselves. It just happens that those pressures net to zero since there is no sideways diminishing component. The sum of these pressures upon matter is what keeps it together and is called the nuclear force. This strong force is, mathematically, the force of gravity expanded from linear to three dimensional. Details of the micro world are summarized below and addressed elsewhere. But scientific attention to gravity is normally spatial, so we focus there now.

4. The Pioneer Anomaly

A validity test of a gravity model is answering an anomaly not understood in other models.

4.1. Kepler Law Square Root

Kepler determined that planets travel slower the further they are from the central sun. They obey the formula $KT^2 = R^3$. This formula can be square rooted and be written $K^{1/2}T = R^{3/2}$. The orbital's revolution rate is a factor of distance to the center, and so the center (sun) controls orbital revolutions. The sun's control comes from its own revolution and provides a horizontal component to gravity beams. This horizontal contribution by the sun's surface rotation motion diminishes as distance increases. It diminishes because it becomes a lesser part of the whole effect upon planets as more non-solar effected beams affect the orbital. The contribution from the equatorial spin of the sun's equator diminishes by distance R and the contribution by solar beams angling in from greater latitudes thru the sun diminishes by $R^{1/2}$. Thus the period T is shown to be a factor of $R^{1/2} \cdot R$, or of $R^{3/2}$.

4.2. v_s/c

Attraction gravity is the net of undiminished downward pushing gravity beams and oppositely directed diminished beams exiting the mass, moving from the ground up. As long as these pushes are linear and directly opposite, the measure of their effect follows the $1/R^2$ law. One can understand this by imagining the same total 3 dimensional effect spread over 2 circles of different radius, one within the other. One over R squared is a factor in current gravity calculations.

However, paep pushing gravity theory recognizes a slight deviation caused by the sideways motion delivered to beams

exiting rotating masses. Remember, gravity bends and can be viewed as moving by both a big factor – c in its linear direction and a tiny perpendicular 'bend' amount. So, gravitational linear pushing measures are subject to modification.

Will a formula here explain the pioneer anomaly where the spacecraft slow unexpectedly as they exit the solar system beyond Saturn? I understand that the measurement of the deceleration has been estimated as $8x10^{-8}$ cm/sec^2. For a first approximation, my model says the gravity beams exiting the sun are shifted sideways by the suns rotation. These are the beams that offset the incoming beams to produce 'net' attraction gravity. The solar circumference is 4,373,897 km, the rotation period 60 x 60 x 24 x 26 days or 2,246,400 sec, so the equatorial shift velocity v_s is about 2 km/sec, and $v_s/c \approx 6.7x10^{-6}$ or one part in 150,000.

A solar equatorial spot is relocated relative to fixed space by v_s due to solar rotation. Exiting beams acquire this shift and continue shifting when into space. Since radiation travels at exactly the velocity c, approximately 300,000 km/sec, it cannot travel at this rate straight up as it must account for the minor sideways motion. The upward exiting distance is just under what velocity c projects for each second while the path shifts by v_s. This approximate calculation of slowing of the gravity beams is $c - \sqrt{c^2 - v_s^2} \approx v_s^2/2c \approx 6.7$ mm/sec. The result is quite small and we need to include the craft velocity to determine how many times to shift for every distance c traveled.

The shift factor increases the net downward push a bit by diminishing the linear upward push. Also, this factor is cumulative. The farther from the sun, the more the v_s/c factor has shifted the overall beam to the left and diminished the outward flowing component of gravity. From this one might calculate the total slowing over the time the spacecraft have traveled.

All ongoing spatial events are primarily rotations of bodies relative to each other. This is the first example where we can see rotational effects of gravity affecting long range linear motion of departure. The exit velocity causes the total shift to be much less that the shift accumulated by orbitals which retain their distance.

5. Laws Addressing Curvature

1. Knowledge is built on merging multiple perspectives.
2. Motion is composed of direction, velocity and pattern relative to a point of perspective.
3. Inertia is absence of motion in the participant's perspective (equilibrium) and motion at a fixed velocity within a continuous pattern relative to a second observer point of perspective.
   a. Patterns include straight lines, circles, and common curves such as ellipses, hyperbolas etc, sine waves, etc.
   b. Inertia in one perspective may appear erratic in another view.
4. Acceleration is a change in velocity, or pattern of motion.
   a. Thus inertial orbiting is the result of merging multiple accelerations.
5. Gravity is the pushing pressure of radiation, the directional net of which determines the equilibrium for local participants and determines the flow to outside observer perspective points.
6. External pushing (otherwise known as force) causes motion and is provided by interaction. The more linear is a contact the greater the percent of pushing capacity that is transferred between the interacting masses or radiations. This determines the resulting velocity for an inertial mass.
   a. The shorter the wave length the less is the force it applies upon contact.
7. Whenever one body exerts pushing upon another body and accelerates that body 2, then body 2 imparts an equal and opposite acceleration push on body 1 which is thus deceleration.

6. Solar System Shared Gravity

6.1. Solar Equatorial Plane

If a stationary ball is impacted and penetrated by beams in all directions it looks like a pincushion. Given our suggested penetration, the exiting output beams will also fill space in all directions while departing linearly. However, if the ball is rotating, the rotation will cause the exiting beams to be bent. The faster the rotation, the greater the bending is overall. The linear velocity of the rotation is greatest at the equator and may visually suggest a platter. The beams exiting there will bend the most. Beams penetrating one pole and exiting the other will not be bent at all and those in between will have bending which increases as the exit latitude decreases. Since the bent beams influence orbitals, the maximum influence is along the equatorial plane and lessens as the latitude increases. Thus orbitals must exist along the equatorial plane and cannot achieve revolution nor be retained at significant latitudes. Our solar system is therefore nearly a plane.

6.2. Wind and Jet Streams

As bent beams arrive at a planet, they cause rotation of the planet by pushing the surface and innards especially on the right side. The push velocity is greatest at the surface and less below. Above the surface these originating beams also aid the rotation of the atmosphere. An incoming beam, tangent at about 1:30, provides significant linear push up to regions above 12:00, where its maximum is near 1600 miles up.

There is the other source - the planet's rotation - that causes penetrating beams also to bend. The combination of push from these two sources causes winds and the jet stream to move generally from west to east. We see from Kepler's 3rd law that the rotation velocity contribution from beams exiting from the surface diminish with radial distance: $K^{1/2}T = R^{3/2}$. Likewise, the added bending from the sun supplied beams diminishes as they depart the planet perpendicularly and no longer apply pressure parallel to the surface. Adding up the two effects means the atmosphere will rotate faster than the surface up to some altitude and then slow to and beyond the geosynchronous altitude from which the velocity as the effect of each factor diminishes with altitude.

In addition to 'space' rotating faster than the orbital body in its atmosphere, there is a varying relationship between surface and its atmosphere's rotation as latitude increases, i.e. as one approaches the poles. The incoming bent gravity beams have the same velocity there as at the equator, but the surface moves slower. That shows to us in the way winds are greater near the poles and flow towards the equator.

6.3. Fly By Anomaly

This discussion reveals the factors that cause an anomaly in estimating the time/velocity of fly by space craft. Logical thought must assume that the downward attraction of earth affects the flyby and that the inertia (bent gravity) also affects it. But here we see that there is a wave in the linear' gravity inertia that increases the velocity in the direction of earth's rotation below the geosynchronous region, and another wave that increases the flow in regions away from the equator.

6.4. Planets Rotate the Sun

Planets rotate as does the sun. Therefore, they send out bent streams of gravity. Some of those beams are aimed at and impact the sun. The result is misunderstood because the properties are reversed. The weak bent beam from a planet can just barely push the sun. I guess if the planet were considered the unmoving center of the universe, the sun might revolve around it in billions of years. However, the planet is moving in orbit so the beams affecting the sun keep coming from different directions. The bottom line result is that the planet causes the sun to rotate a bit. Since all planets cause the sun to rotate, the sum of the causes can somehow be totaled up to explain some part of the actual rotation rate of the sun. Other stars also help rotate the sun with their spins.

6.5. Magnetosphere

Paep beams exiting the sun bend left due to its rotation and ultimately the portion arriving at an orbit will push an orbital in orbit. Those solar beams moving across the face of the earth, i.e. bending past before arrival, are seen from the back by earthlings and are misleadingly labeled as solar wind. The earth also bends paep beams to its left. Picture a region between the sun and earth where the beams from the sun and earth interact, each bent counterclockwise relative to their origin body. There will be turbulence surrounding a small region of equilibrium which is the focus of the magnetosphere.

6.6. Galaxies

As suns cause planets to orbit, stars can cause each other to revolve usually vs. a virtual center. Extensions of this logic lead to explanations of non centered gravity in galaxies appearing different than in solar systems. This eliminates the need for dark matter, dark energy, and modifications of gravity. As discussed elsewhere, the relative stellar motions logically lead to arms, and domes along with tilted orbits and elliptical orbits.

6.7. Moons

A somewhat rigid line with width will flare out when bent. Assume a gravity beam has some measure of width. The more the bend both by angle and distance, the less localized the line becomes. Solar gravity beams bend to the left. They push planets to the left – counterclockwise. Planets do likewise to their moons. The effect upon moons is shared by solar and planetary gravity beams. Most moons orbit counterclockwise. Some moons that are distant from the planet or at higher latitudes may experience a greater push from solar gravity than from the planet gravity. As a result they revolve clockwise relative to the planet because they receive slower counterclockwise pressure from the solar gravity than the planet does. Recognize that all are revolving clockwise relative to the dominant sun. Outer moons of Jupiter and of Saturn exhibit this 'contradiction'.

The bending of the solar gravity beams also influences the number of moons. The intersecting of bent beams helps create masses. With the bent solar beam flaring out and braking up it will intersect at more points with planetary beams and thus form more independent masses. The longer distance the solar beam travels the more it flares and breaks up to create more moons.

7. Micro World Gravity

7.1. Magnetism

To understand magnetism, picture paep gravity beams deflected perpendicularly by a series of similarly spinning electrons. The result is increased gravity push in one direction (repulsion) and decreased push in another direction (attraction). A series of electronically stimulated wires wrapped to enclose a region redirects paeps in one direction around a circle of the wire via the right hand rule. This gravity region is a field as it is more redirected near the wire than it is at greater distance. On the inner side of the wire circle the paeps are redirected in the opposite direction producing a beam since the area is enclosed.

7.2. Nuclear Forces: Weak Gravity, Strong Nuclear?

The force of gravity is said to be long range and weak. Nuclear force is short range and very strong. This is a very misleading distinction. The 'attraction' force of gravity is linear while the nuclear force is an accumulation of simultaneous action from all three dimensional directions. The nuclear force is 10^{39} times the gravitational force. That should give the measure of a paep beam and mean that, if we add up the pressures, that 10^{39} beams strike a sphere. These are the beams directed straight at the center.

Imagine a nucleus at the center of earth. That point will serve as the *xy* coordinate axis center. We draw a circle of radius 1 around that origin point to represent earth's surface, say at the equator. Now draw eight arrows, one from each direction toward the origin. If these are pushing forces they apply almost the same amount of force at the surface as at the center. Likewise if we put more arrows at all 360° of the circle aimed at the origin, the surface and origin will be subject to the same amount of pressure (excluding any paep conversion).

A nucleus radius is about 10^{-14} m. Earth's radius is 6,378,000m, or $6x10^{20}$ times larger. Earth's surface, which receives gravity throughout, is about $(6x10^{20})^2$ or nearly $40x10^{40}$ times larger than a nucleus. Dividing this by earth's gravity of 9.8 m/sec gives a sum of forces pushing on earth's surface which slightly exceeds the force of 10^{39} at the nucleus. The forces are similar, gravity and nuclear forces measure alike.

Paep pressure is distributed at the surface but concentrated at the center. Depending on particle size and paep beam size, gravity would measure nearly infinitely more at a nucleus than at the surface. Thus concentrated gravity pressure exceeds disbursed pressure. When focused three dimensionally, the force of paeps is the nuclear force. The concentration focus shown at earth's center happens everywhere, creating nuclei.

Recognizing the lateral potential of external gravitation explains cosmological forces which dominate physics.

The electric force $F = kqQ / R^2$ is written to make it appear linear like the gravitational force $F = GMm / R^2$. Charge is a virtual concept assigned to protons and electrons. From that protons are incorrectly designated as round particles and their spin is redefined as charge.

The force *k*, which acts on charge, is 10^{20} times *G*. This might correlate with the nuclear calculation if we assume charge is two dimensional.

The weak force serves as the basis for decay of elements. In general, the higher the atomic number of an element, the greater the number of electrons orbiting the nucleus. For larger atoms, it becomes increasingly likely for an electron to be impacted directly by oncoming paep beams. We will see how paep removal of an electron automatically reduces the number of protons and restructuring of the electron shells varies the number of neutrons.

8. Conclusion

Presented here are some of the considerations necessary in order to correlate this directly inverted view of gravity with many of the physical concepts that have developed since the time of Newton. On the one hand science successfully gains increasing knowledge about the universe using today's standard model. However a new collection of ideas and perspectives appears by adding this perspective to one's repertoire potentially opening new areas of interest.

There is always more to learn such as the relationship of gravity with electromagnetic radiation and with mass including the structure of mass and its main components. Questions that arise are: Can we modify gravity? Does polar non bending allow new travel directions? Should our particle examinations be bending rather than accelerating of particle beams? What are valid orbits? Can we expand magnetism to the nonmetallic? Should we compensate for bend in communication signals to other star systems?

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