Gravity's Origin, Impetus & Unification

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Abstract

Gravity and its unification with electromagnetism along with the other two assumed forces of nature, the strong and weak nuclear forces, is easily resolved by simply recognizing the broader implications of already well-established, widely held theory: Subatomic particles spontaneously condense out of the all-pervasive field of radiant electromagnetic energy that comprises the universe. This produces a commensurate decrease in the universal field's density that mostly occurs immediately around emerging particles that innately diffuses inward exponentially because of a field's uninterruptible continuity and a sphere's inherent geometry. This is what constitutes a particle and the bodies' they compose gravity field. Runaway gravitation naturally ensues as they mechanically pursue equilibrium in the ever-decreasing density of their ever-merging (electromagnetic) gravity fields.

Contents

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Origin

Something is never created from nothing. Particles don't just pop into existence out of nowhere. They condense into being out of the radiant electromagnetic energy that is the universe that expresses as an infinitely vast, all-pervasive universal field [1]. (Use **[Alt][←]** to return.)

The universal field is everywhere. It extends indefinitely. If it could be separated from matter, it'd correspond to all space. It's continuous. Its continuity is unbreakable. And it can't be interrupted. But just as it is with any ordinary field, its intensity, which is the same as density, can and does vary. None of this is the least bit controversial. It's central to the underlying tenets of orthodox cosmology.

Few would also disagree that there's no such thing as matter per se. Particles aren't composed of any actual material. Nor do they have a surface. They're just small condensed spherical fields of radiant energy of increasing density that reach some maximum concentration at their center. So there's no separation between a "particle" (or the objects they comprise) and the field they originate from and now reside [2].

In his book, *Relativity: The Special and the General Theory*, Einstein suggests that, "Physical objects are not *in space*, but these objects are *spatially extended* [3]." But a more correct interpretation would be that all objects are *electromagnetically extended*.

Because they're one and the same, every time a particle "spontaneously" congeals into existence the entire universal field is put at further loss.[1] Its density decreases commensurate with the emerging particle's condensing. But that minuscule thinning isn't spread evenly throughout the entire universe.

Nearly all of it occurs in the vicinity of the particle. What's not taken up and drawn into the particle is left diffusing inward immediately around it, dissipating exponentially toward its center, spherically, while the field's outward radial condensing continues infinitesimally without end.

1. You have to wonder, what is the catalyst behind a particle's inception? What is it exactly that initiates its congealing and causes it to suddenly "materialize"?

Despite the universal field's opposite inward diffusion, it still has to dissipate exponentially per the inverse square law just like any diffusion because of the inherent three-dimensional geometry of a sphere. Whether the diffusion dissipates inward or outward doesn't matter. It's still bound to the exponential gradient intrinsic to spherical geometry [4].

It's the inward diffusion of the universal field's ambient electromagnetic radiation that's not been drawn into the particle but remains outside it and the bodies they've coalesced into that defines a gravity field. It's the innate compounding of those gravity fields that causes their density to always be at their least directly in between the bodies they surround. This occurs at their common center of mass, their center of gravity, regardless of the distance or extreme the conditions [5].

Impetus

Naturally compelled to seek equilibrium in the varying density of their ever-merging gravity fields, all bodies from particles to galaxies are constantly pushed mechanically by the highest density toward the lowest. This causes their unrelenting gravitation toward one another. Runaway coalescing and its concomitant condensing naturally follow.

When enough material accumulates, the resultant pressure from the ever-decreasing density of their ever-combining gravity fields begins to trigger fusion reactions. This ultimately transmutes every particle back into the electromagnetic radiation from which it arose [6].

At the scale of galaxies, gravitation's inherent runaway nature gives rise to an ever-increasing infall of ever-coalescing material that ceaselessly migrates inward with increasing velocity toward a galaxy's common center of mass. As material nears its core, the ever-increasing inward pressure from its exponential condensing collapses it back into the radiant energy it originated from and radiates it back out. Or in more evolved, well-developed spirals, it's spewed out in huge bipolar jets [7].

Eventually, it slows, cools, and at some point reconstitutes back into ordinary matter. It can then begin gravitating back to its or another nearby galaxy in a never-ending process of perpetual recycling.

Unification

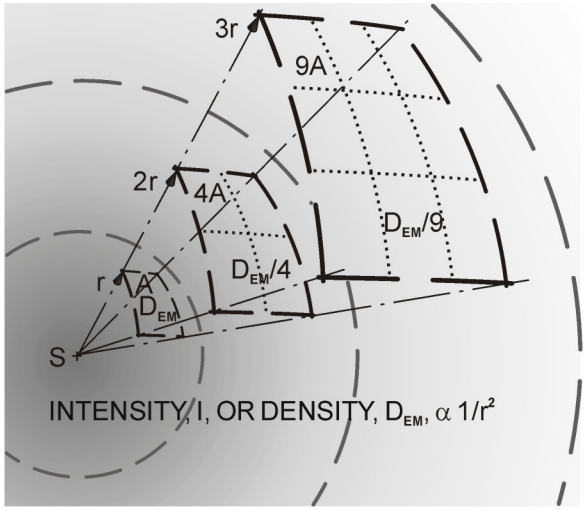
Gravity's unification with electromagnetism, along with the assumed strong and weak nuclear forces, is naturally achieved with the self-evident realization that a gravity field is nothing more than an inward diffusing electromagnetic field. When particles innately spawn from and congeal out of the universe's elemental field of electromagnetic energy it creates a corresponding deficit in its density that manifests immediately around emerging particles and the bodies they compose.

It is a field's intrinsic uninterruptible continuity combined with the inherent properties of a sphere that adheres to the exponential gradient of the inverse square law that causes its inward exponential diffusion. This is how an electromagnetic field becomes a gravity field.

It's the innate compounding of inward diffusing electromagnetic/gravity fields that causes bodies to accelerate toward one another. Their combined highest field density constantly pushes bodies together toward their lowest that's always located directly in between them toward their common center of mass.

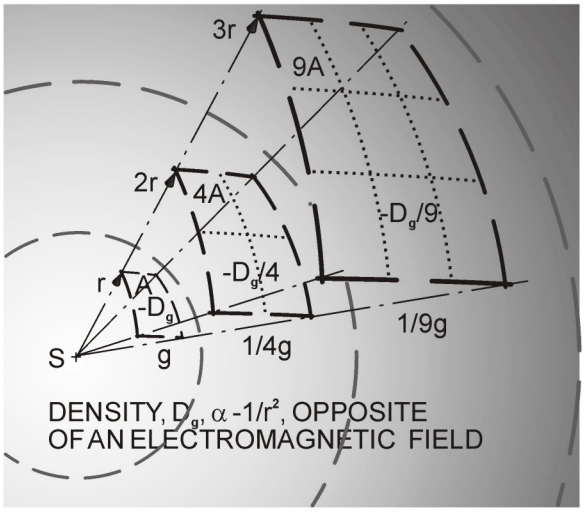
The ever-decreasing field density that naturally results leads to runaway coalescing/condensing as a matter of course. From this sensible, well-grounded, practical, physically tangible reality all else falls neatly into place.

(See **Figure 1**, Inverse Square Law, Field; **Figure 2**, Fields; **Figure 3**, Gravitation; **Figure 4.1**, **4.2**, **4.3**, **4.4**, The Shape of Gravitating Bodies - 1, 2, 3, 4; **Figure 5.1**, Atoms; **Figure 5.2**, Neutrons & Isotopes; **Figure 5.3**, Ions; **Figure 5.4**, Aufbau or Build-up Principle of Electrons; **Figure 6**, Gravity's Perpetual Recycling - beginning on the next page. All diagrams have been adapted from *The Reality of Relativity*, Last revision 2025. Amazon, Independently published, 2018, https://www.amazon.com/ dp/B07CVMDV66.)



1. ELECTROMAGNETIC FIELD

ELECTROMAGNETIC FIELD INTENSITY, WHICH IS THE SAME AS DENSITY, DECREASES PROPORTIONAL TO THE INVERSE OF THE SQUARE OF THE RADIUS. THIS DIFFUSES ITS OUTWARD ACTING PRESSURE GRADIENT EXPONENTIALLY.



2. GRAVITY FIELD

GRAVITY FIELD INTENSITY, OR DENSITY, ALSO DECREASES PROPORTIONAL TO THE INVERSE OF THE RADIUS SQUARED. BUT ITS DIFFUSION IS INWARD. THIS INCREASES ITS OPPOSITE, NEGATIVE PRESSURE GRADIENT EXPONENTIALLY PER GRAVITY'S FORCE, g.

INVERSE SQUARE LAW, FIELD

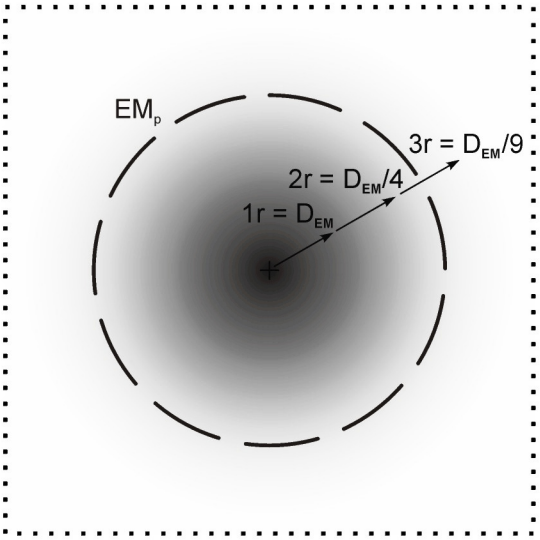
An electromagnetic (EM) field, depicted in section view by the diffusing background in diagram **1**, is subject to the inverse square law that's the product of the three-dimensional geometry of a sphere. So the field's intensity, which is the same as density, that produces pressure which is force, twice the distance from its source is diluted by four times the area. This reduces its density to 1/4 the original. At three times the distance, it's spread over nine times the area, which reduces the density to 1/9 the original, and so on where D_{EM} (the density at a given radius) = S (the original density) / 4 r^2 (the area of a sphere).

The tangible, radiant, EM energy of the universal field that particles condense out of is all-pervasive, continuous, inseparable, and it varies in density. So the remaining ambient radiation that's not been drawn into a congealed particle has to thin inward, diffusing exponentially toward its center. This is what constitutes their, or collectively the bodies they compose, gravity field, portrayed in section view as the diffusing background in diagram **2**.

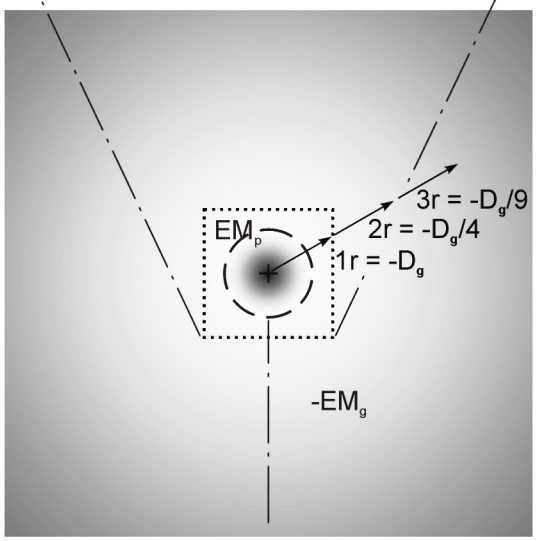
It's the opposite of an EM field. Its lowest density is reciprocal to the EM field's highest. Still bound to a sphere's inverse square law, its density, which is still intensity, which still equates to pressure and force, still has to dissipate exponentially. The gradient remains the same. It just expresses the opposite direction, diffusing inward instead of outward where D_g (the density at a given radius) = -S (the original point source strength or negative density established by a body's mass) / 4 r^2 (the area of a sphere).

So at twice the distance from the center, its original negative density is diffused over four times the area, which is 1/4 the original that reduces the inward acting pressure by the same amount, decreasing gravity's force to 1/4g. At three times the distance, its negative density is spread over nine times the area, which is 1/9 as dense as its original that decreases the inward acting pressure the same, reducing gravity to 1/9g, and so on.

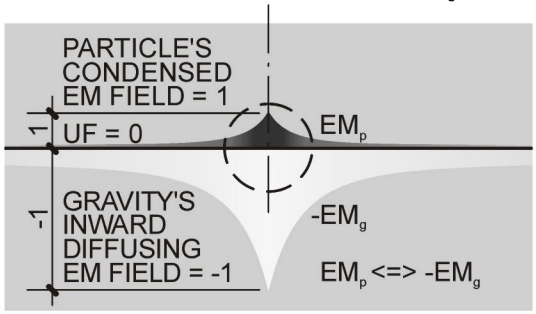
Figure 1 (7.2 Inverse Sq Field vf 8.1a)



1. ELECTROMAGNETIC FIELD
POSITIVE DENSITY DIMINISHES, D_{EM} $1/r^2$



2. GRAVITY FIELD
NEGATIVE DENSITY DIMINISHES, D_g $-1/r^2$



3. RELATIVE FIELD DENSITY & SIZE
A RECIPROCAL EM GRAVITY FIELD ($-EM_g$) WITH NEGATIVE DENSITY & INWARD DIFFUSION IS INNATELY CREATED BY THE RESULTING DEFICIT WHEN A PARTICLE (EM_p) CONGEALS OUT OF THE UNIVERSAL FIELD (UF).

FIELDS

The fundamental constituent of the universe is radiant electromagnetic energy that manifests as a universal field (UF). It expresses in two ways, as an electromagnetic field (EM) and its inverse, a gravity field ($-EM_g$). They're the same UF but with opposite diffusion and different densities that are the intrinsic byproduct of a particle's inception. They coexist and coincide. But they're reciprocal. And one cannot exist without the other because of their uninterruptable continuity.

When the UF "spontaneously" congeals into a subatomic particle (EM_p), it's defined as matter with an assigned amount of mass. But at its essence, it remains radiant EM energy. It's portrayed in an expanded section view by the diffusing background in diagram **1**. The dashed circle represents its theoretical limit or that of any individual body.

The radiation drawn into and composing the particle is the radiation from the UF. That deficit is what constitutes the particle's gravity field ($-EM_g$). They're equivalent because they're the same. They're inverse because of the particle's innate condensing, which is also why it's much smaller, as represented in **2**.

If the UF were assigned the neutral value of zero (0) and the condensed particle (EM_p) a value of one (1), the resultant inward diffusion of the UF, the particle's gravity field ($-EM_g$), would have a corresponding negative quantity equivalent to negative one (-1). They naturally reciprocate despite their divergent size and opposite diffusion, as implied in diagram **3**.

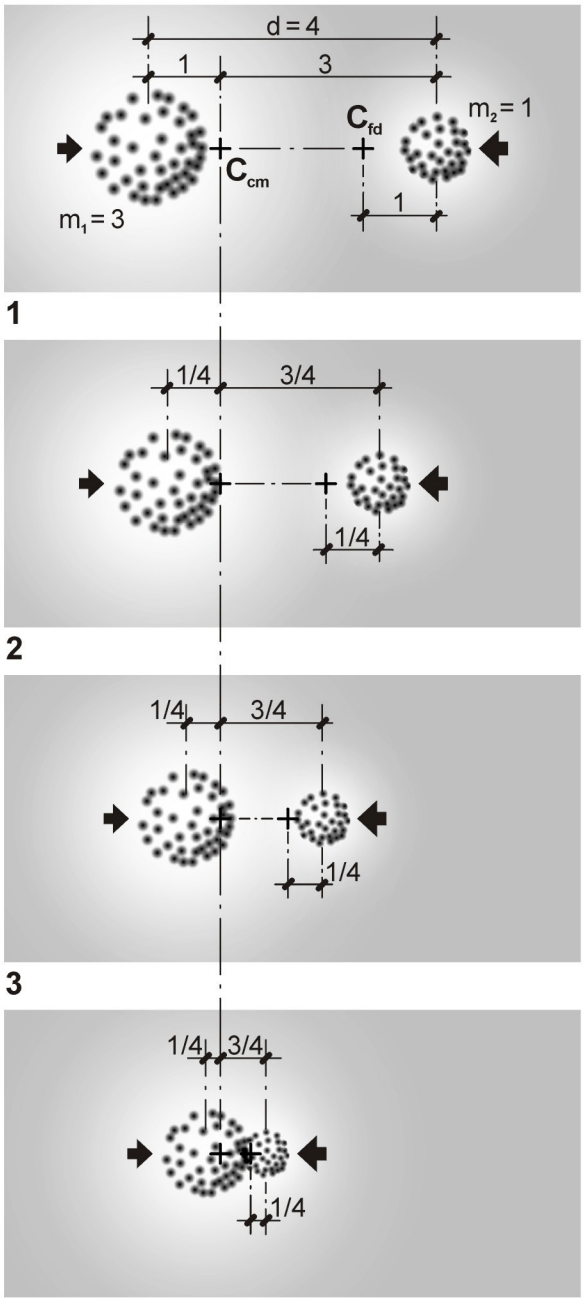
It makes no difference whether the EM field's diffusion dissipates inward or outward. The gradient still has to diminish exponentially. Both are subject to the inherent geometry of a sphere that's bound to the inverse square law (Intensity or Density $1/r^2$).

The exponential outward diffusion of a particle's EM field from higher inner density to lower outer density creates outward acting radial pressure. This should be interpreted as a positive charge, having a male or originative quality.

The exponential inward diffusion of gravity's EM field from higher outer density to lower inner density creates inward acting radial pressure, which should be viewed as a negative charge, having a female or receptive quality.

Figure 2

(27 Fields vf 12a)



COALESCING BODIES

BODIES AREN'T ATTRACTED TO ONE ANOTHER. THEY'RE CONSTANTLY PRESSED TOGETHER BY HIGHER FIELD DENSITY TOWARD LOWER FIELD DENSITY AS THEY MECHANICALLY REACTIVELY SEARCH FOR EQUILIBRIUM IN THE EVER-DECREASING DENSITY OF THEIR EVER-MERGING GRAVITY FIELDS.

Figure 3

GRAVITATION

A natural consequence of a particle's emergence, gravity fields, depicted in section view by the diffused background, necessarily diffuse inward exponentially because of basic spherical geometry and the uninterruptible continuity of radiant electromagnetic energy.

Gravity fields' innate compounding causes that inward diffusion to always be at its least directly in between the particles and the bodies they surround at their common center of mass, $\mathbf{C}_{cm}$, which is the same as their common center of gravity.

Mechanically pursuing equilibrium in the ever-decreasing density of their ever-compounding gravity fields, all bodies, be it particles or galaxies, are constantly pushed by the highest field density toward the lowest. This inexorably leads to runaway coalescing that ultimately ends with fusion reactions transmuting all matter back into the radiant energy it originated from.

Because gravity fields not only surround but also permeate all bodies, including atoms, depicted as the small spheres comprising the spherical bodies, their compounding simultaneously causes both coalescing and condensing at all scales consistent with Newton's law of gravitation: $F = G(m_1m_2) / d^2$, where F is the "attractive" force, G is the gravitational constant, m the mass, and d is the distance between their centers.

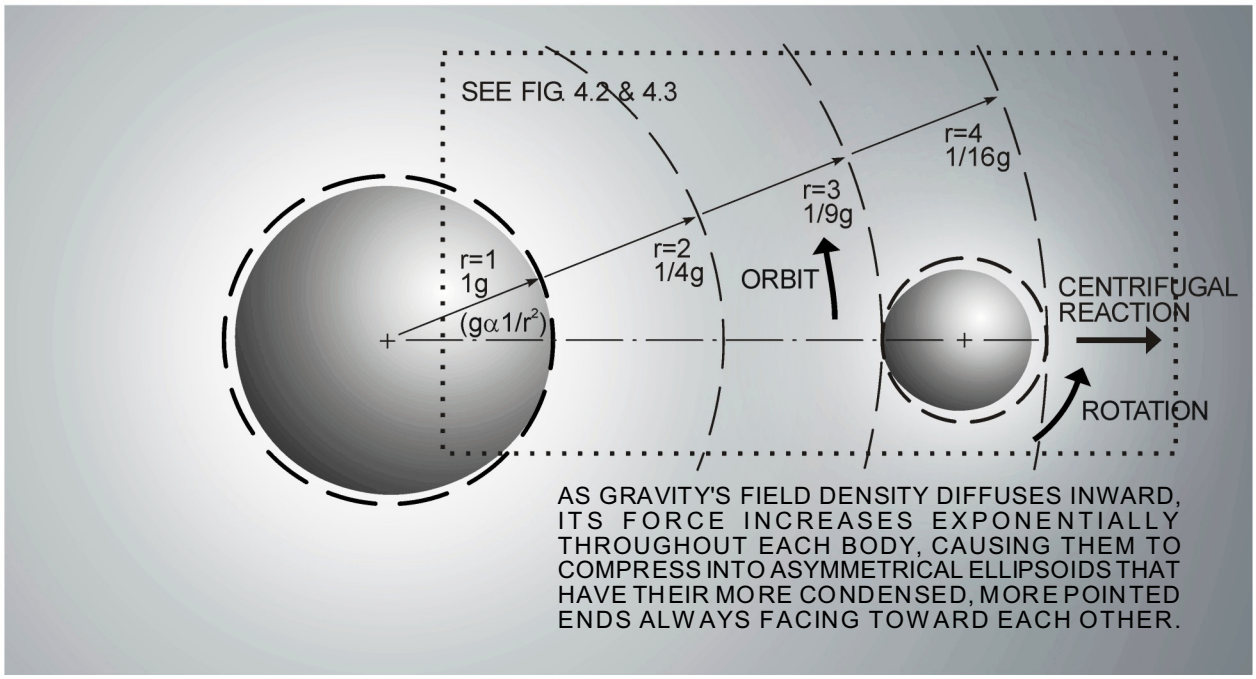
The distance to their $\mathbf{C}_{cm}$ from m_1 is $d_{cm} = m_1d_1+m_2d_2 / m_1+m_2$, where $d_{cm} = 3(0) + 1(4) / 3+1$ or 1. From m_2, it'd be $1(0) + 3(4) / 3+1$ or 3.

$\mathbf{C}_{fd}$ indicates the location in between them where they share a common field density. The distance to their $\mathbf{C}_{fd}$ is opposite of or naturally reciprocal to their $\mathbf{C}_{cm}$. Both their $\mathbf{C}_{cm}$ and $\mathbf{C}_{fd}$ could be interpreted as non-centrifugal Lagrange points where the gravitational influence remains in equilibrium.

Actual Lagrange points incorporate orbital motion's centrifugal force. It's not included in this example for clarity. If it were, their $\mathbf{C}_{fd}$ would become the $\mathbf{L}_1$ Lagrange point that'd have to be closer to m_1 to compensate for the outward centrifugal force.

The distance to their $\mathbf{C}_{cm}$ and $\mathbf{C}_{fd}$, their relative rate of motion toward each other, and their relative condensing, all remain proportional to their masses as they relentlessly gravitate in the ever-thinning density of their ever-compounding gravity fields, conceptually portrayed in the sequence of diagrams **1**-**4** [8][9].

(28 Gravitation vf 12.1a)



GRAVITY'S CONDENSING (TOP-DOWN VIEW)

THE SHAPE OF GRAVITATING BODIES - 1

Bodies don't stretch or "spaghettify" as they gravitate. They continue to condense, contracting omnidirectionally into ellipsoidal shapes that are slightly asymmetrical similar to an egg. This is due to the exponential decrease in density of their compounding gravity fields that permeates their bodies, portrayed in section view by the diffusing background.

For simplicity, if we set the smaller body's diameter equal to the larger's radius and locate it three radiuses out then the larger's force of gravity, defined as 1g at its surface, would radially affect the smaller, sweeping across/through its entire body, exponentially decreasing from 1/9g at its closest point to 1/16g at its farthest, causing more condensing/ compression at the closer end.

The smaller's gravity field would affect the larger in the same way but much less, creating a slight asymmetry in their condensing that has their more pointed, more compressed ends always pointing toward one another. Or more precisely, they point toward their common center of mass. This applies for any number of objects.

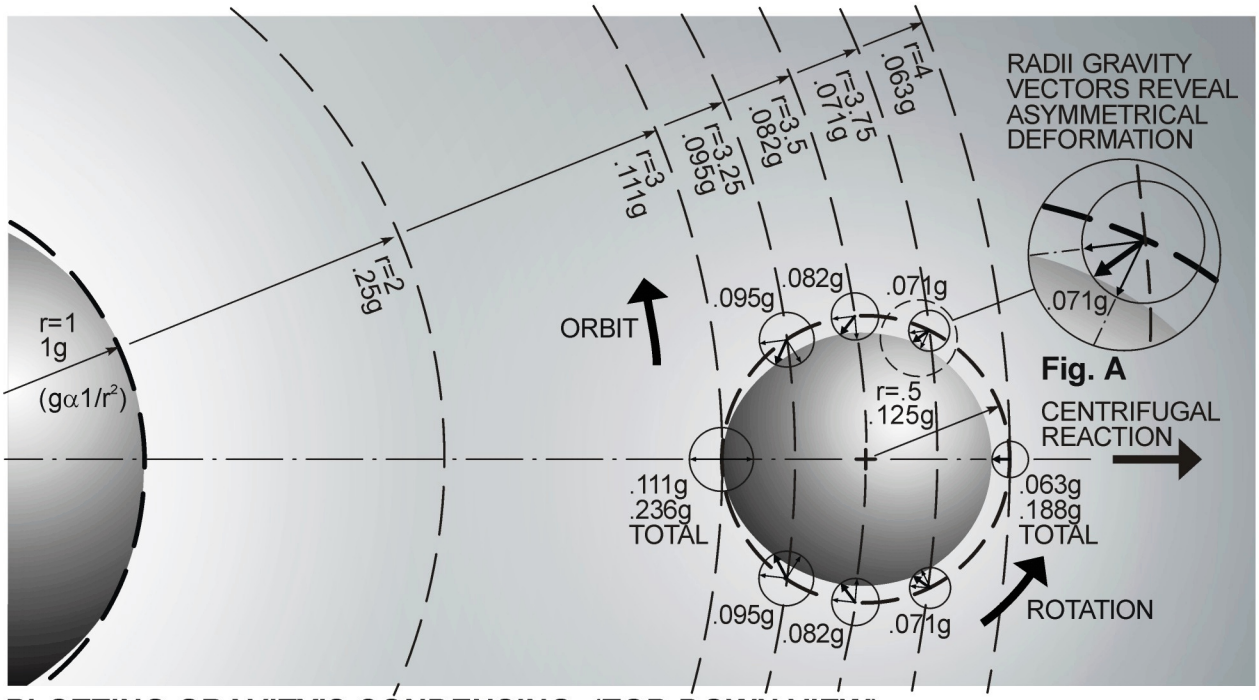
If the smaller body had a decreasing orbit or none at all, the asymmetry of its deformation would increase while it continued to condense/compress until they merged. If it had an increasing orbital and/or rotation rate where its outward centrifugal force began to exceed gravity's inward condensing, its material would begin to loosen, become weightless, and start dispersing.

But that dispersion would begin first from its backside, its outermost point where the centrifugal force would be the greatest and gravity's compounded force would be at its weakest. This is routinely observed as the fanned dust tails of comets that always diffuse to the outside of their elliptical orbits opposite the Sun.

An obvious example of a body's asymmetrical ellipsoidal deformation is the Moon's, and to a lesser degree the Sun's, effect on the Earth's oceans. Water's pliability causes it to more readily deform than the rocky crust below, making its distortion easily perceivable. Tides are simultaneously at their highest both facing and opposite the Moon where they're slightly lower.

This distortion is not the product of the "pull" of the Moon's gravity as many believe. If it were, there'd be a gravity source on the opposite side pulling those oceans into their high tide. Those tides are often explained as the result of no pull, or sometimes more rationally but still incorrectly, the product of the Earth-Moon system's centrifugal force [10].

Figure 4.1 (11.1 Shape vf 13a)



PLOTTING GRAVITY'S CONDENSING (TOP-DOWN VIEW)

THE SHAPE OF GRAVITATING BODIES - 2

The inward exponential diffusion of compounding gravity fields permeates gravitating bodies causing their ongoing condensing into evermore compact asymmetrical ellipsoids. This effect can be approximated by bisecting the angle established by the larger body's gravity expressed as proportional radii vectors to both bodies, as indicated in **Fig. A**. The bodies' uniform compression from their own self-gravity is assumed, represented by the heavier dashed circle.

Each body's volume ($V = 4/3\ r^3$) can be used to establish their relative gravity. But any valve could be adopted. Setting the larger's radius at 1.0 (the unit of measure doesn't matter), its volume will be 4.19. For the smaller whose radius is half of the larger's, its volume will be .524. So the smaller body's volume will be about one eighth of the larger's. That's the ratio we'll use for their gravity: the larger, 1g, the smaller, .125g.

At 3.0 radiuses out, the bodies' closest point, the larger's gravity ($g \quad 1/r^2$), will be .111g ($1/(3)^2$). With gravity's radii vectors (exaggerate for clarity) pointing in opposite directions, they produce no distortion. The total gravity here would be .236g (.111g + the smaller's .125g).

At 3.25 radiuses, the larger's gravity decreases to .095g ($1/(3.25)^2$). An approximation of the smaller's distortion at this location can be plotted by applying a gravity vector from the smaller body's surface that bisects the angle set by each body's radii.

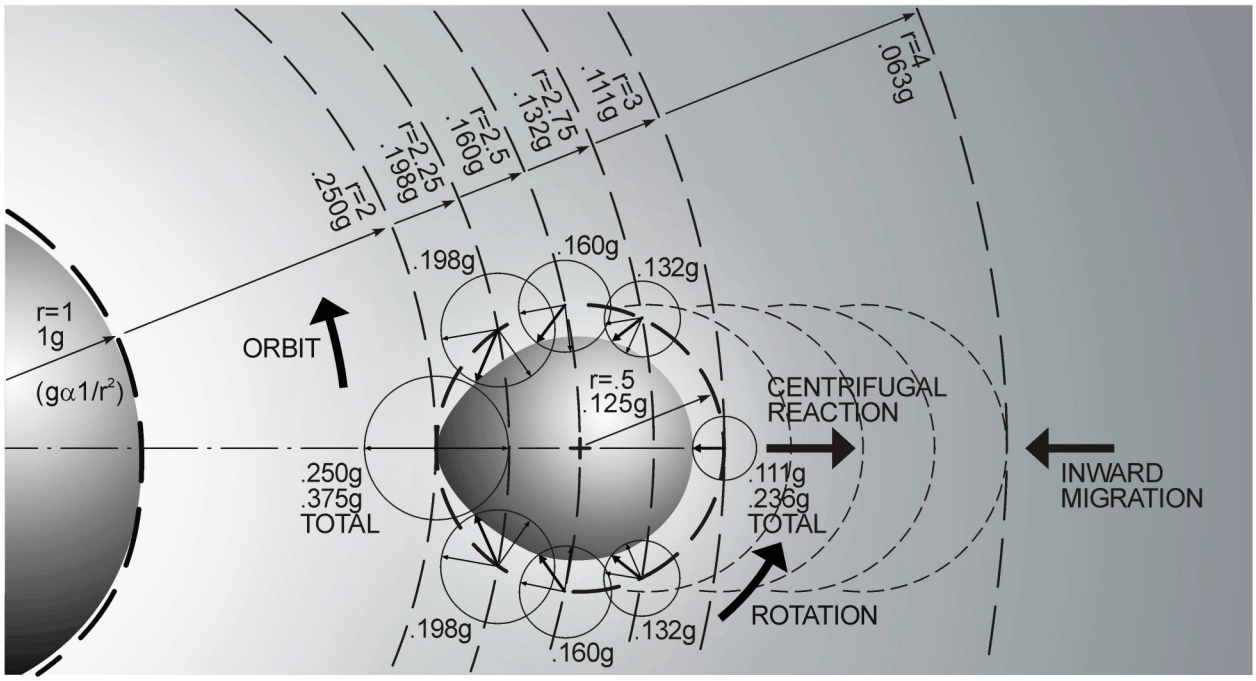
Using the same method at 3.5 radiuses where the larger's gravity diffuses to .082g ($1/(3.5)^2$) and at 3.75 radiuses where it's weakened to .071g ($1/(3.75)^2$), the smaller's deformation at those locations can be charted.

At 4.0 radiuses out, the farthest point from the larger, its gravity diminishes to .063g ($1/(4)^2$). A radii vector proportional to that gravity defines the outer limit of the smaller's condensing. The total gravity here will be only .188g (.063g + .125g).

With the total gravity at the outermost location always being less than the closest, the material of any body with an increasing rotational and/or orbital velocity will always begin to become weightless, dislodge, and start dispersing from their outermost point first as their increasing centrifugal force's outward dispersal begins to exceed their gravity's inward coalescing/condensing.

This simplified representation reveals how gravitating bodies distort into asymmetrical ellipsoids that continue condensing until they merge unless subject to high enough centrifugal forces that cause them to begin shedding material, which always occurs from their backside first.

Figure 4.2 (11.2 Shape vf 13a)



PLOTTING GRAVITY'S INCREASING CONDENSING (TOP-DOWN VIEW)

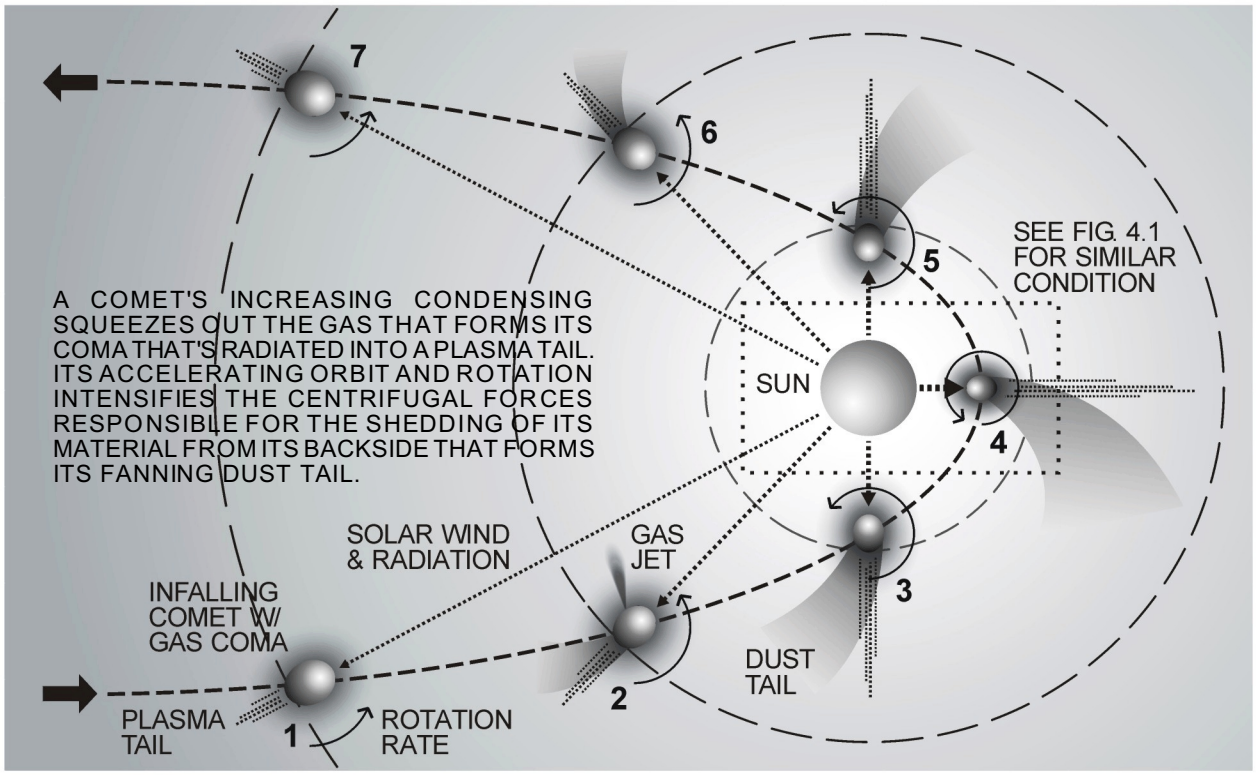
THE SHAPE OF GRAVITATING BODIES - 3

The ongoing contraction and increasing distortion of gravitating bodies can be conceptually demonstrated by graphically charting gravity's effect at the closer distance of 2.0 radiuses in the same manner that was done at the 3.0 radius distance (also exaggerated for clarity). The conclusion is self-evident: The increasing pressure from the exponentially increasing gradient that's produced by the inward diffusion of gravity's field causes ever-increasing asymmetrical ellipsoidal condensing. No stretching. No spaghettifying.

The relentless coalescing of gravitating bodies, that's a natural byproduct of gravity's inherent runaway nature, has to continue unabated until they merge unless increasing outward centrifugal forces begin to exceed gravity's inward coalescing/condensing. This causes the smaller body's material to begin to loosen, dislodge, and disperse, which is always initiated from the farthest point on its backside.

When the merging gravity fields of coalescing bodies create enough inward pressure, fusion reactions are triggered that begin converting their matter back into the radiant electromagnetic energy it originated from.

Figure 4.3 (11.3 Shape vf 13a)

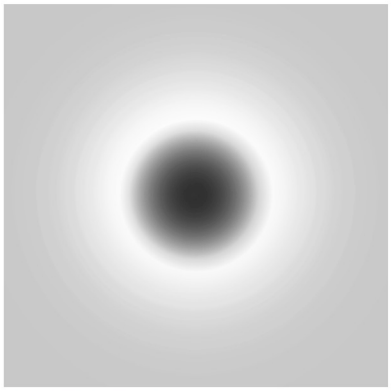


GRAVITY'S EFFECT ON COMETS (TOP-DOWN VIEW)

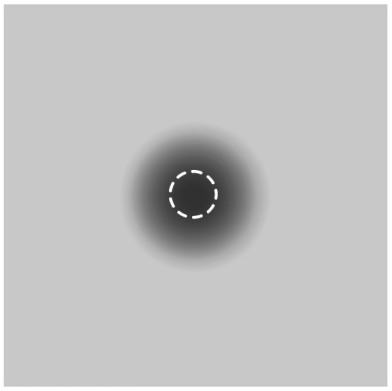
THE SHAPE OF GRAVITATING BODIES - 4

1. A comet that was theoretically uniform and pliable would assume the shape of an asymmetrical ellipsoid that was continually condensing while its smaller, more compressed end always pointed toward the Sun due to the exponential decrease in the density of the Sun's gravity field, portrayed in section view as the diffusing background. That decreasing density in its gravity field at first gently squeezes out the comet's gas, mostly hydrogen, to form its coma, that may or may not have been evaporated/sublimated from internal material by the intensifying pressure and heat from its increasing compression. The Sun's radiant energy then begins to ionize the gas and blow it straight back to form the comet's plasma tail.
2. As its condensing continues, the gas is sometimes seen jetting out at high velocities. This confirms its internal origin that's more likely caused by the pressure originating from the increasing compression than the external heat from increasing sunlight.
3. The comet's increasing condensing also increases its rate of rotation, indicated by the increasing length of the radiused arrows. When its outward acting rotational and orbital centrifugal forces begin to exceed gravity's inward acting condensing, its material begins to dislodge, fall away, and disperse into an arcing fan shape to form its dust tail. This always occurs from the comet's backside opposite the Sun where the combined centrifugal forces are the strongest and gravity's compounded condensing is the weakest.
4. The comet's coma along with its plasma and dust tails continue to increase until it reaches its closest point to the Sun, perihelion, where its condensing and centrifugal forces and the Sun's radiant energy are all at their maximum.
5. As it begins to leave the Sun's vicinity, the now increasing density of the Sun's gravity field begins to reverse the comet's condensing/contraction that in turn slows its rate of rotation. Together with its slowing orbital velocity, its rotational and orbital centrifugal forces weaken, curbing its loss of material, which reduces the size of its dust tail.
6. As it continues to move farther away, solar wind and radiation also diminish, reducing the size of its plasma tail as well.
7. The comet's condensing continues to ease all the way to its aphelion, its farthest point from the Sun, where the pressure from its compression that produces the outgassing that forms its coma is at its weakest [11].

Figure 4.4 (11.4 Shape vf 13a)



1. PROTON



2. ELECTRON

3. HYDROGEN ATOM

ATOMS

Protons should not be considered tiny physical particles within an electromagnetic field but as the field itself. There's no surface where the field stops and matter begins. The field becomes progressively more dense until it peaks at its center, represented in section view by the darker diffused circle in **1** & **3**. But because that proton field has condensed out of the universal field of electromagnetic radiation, the ambient radiation not drawn into the proton has to decrease in density around it diffusing exponentially like any field because of the geometry of a sphere.

But its diffusion disperses inward not outward, which defines its gravity field, depicted in section by the diffusing background in **1** & **3**. Because the decreasing density of a proton's gravity field is larger than the increasing density of its electromagnetic field, the gravity field's compounding with the fields of other particles tends to push them together as they naturally pursue equilibrium, mechanically seeking the lowest density that always lies directly between them. So protons should actually be considered negatively charged.

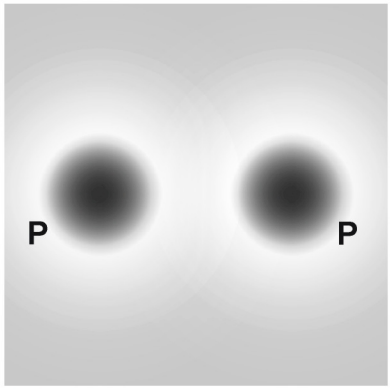
Convention has protons positive charged and electrons negative. Apparently, this has been mostly an arbitrary designation. But it doesn't correspond to physical reality. It's one of the reasons why gravitation and electromagnetism are not recognized as being the same effect.

Electrons should also be considered as having condensed out of the universal field. Its charge is considered equal to that of a proton. But its mass is 1/1837th as much. So it yields a much smaller gravity field, indicated by the small white dashed circle. For graphic clarity, it's shown proportionally much larger than it would actually be.

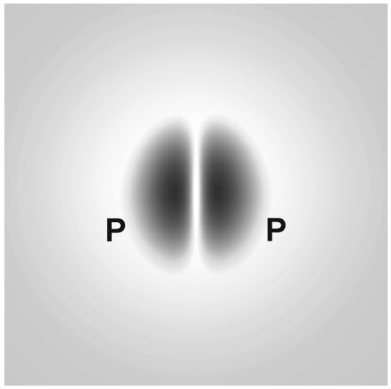
Being that the decreasing density of its gravity field is smaller than the increasing density of its electromagnetic field, it has a repulsive effect that when compounded with the fields of other electrons tends to push them away. So in reality, it's positively charged. With the electromagnetic field of the electron still smaller than the gravity field of the proton, the compounding of their fields still pushes them toward one another.

An atom's electrons should not be envisioned as small objects that rapidly orbit the nucleus as always portrayed. They're more accurately conceived as having been pressed down and smeared out all over and around the entire nucleus, spherically, three-dimensionally, by the decreasing density of the universal field enveloping it, the atom's gravity field. It's compressed to a level where the repulsive effects of all the fields balance out and find equilibrium, as is implied in the section view through a hydrogen atom that has only one electron and one proton [12].

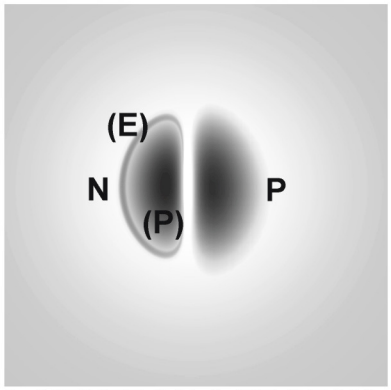
Figure 5.1 (18.1 Atoms vf 8a)



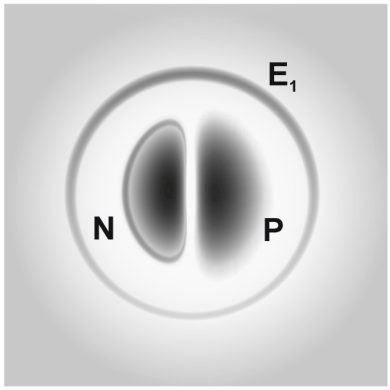
1. TWO PROTONS



2. PAIRED PROTONS



3. NEUTRON & PROTON



4. HYDROGEN ISOTOPE

Figure 5.2

NEUTRONS & ISOTOPES

A neutron can be considered a merging of a proton and an electron. The compounding of their two electromagnetic fields and their two gravity fields are theoretically balanced to yield no charge, that is if it could stand alone. Its neutral charge suggests that the electromagnetic fields of protons and electrons are half as strong as their combined gravitational fields.

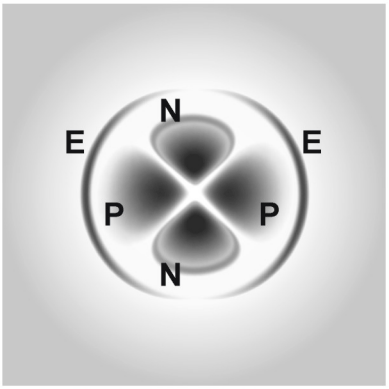
For numerical convenience, if we assume the strength of a proton's gravity field is (-1), negative because of the field's decreasing density, and we know that an electron's is 1/1837th of that (-.00054) then their electromagnetic fields would have to be half of (-1) + (-.00054) or (+.50027), positive because of its increasing density. So a proton's relative charge would be its gravity field (-1) plus its electromagnetic field (+.50027) or (-.49973). And an electron's relative charge would be its gravity field (-.00054) plus its electromagnetic field (+.50027) or (+.49973).

Neutrons usually only exist, though, through the initial pairing of two protons, located at **P**. The compounding of the decreasing density of their fields, (-.49973) + (-.49973) or (-.99946), first draws them together mechanically as they naturally seek equilibrium. Then the even higher decrease in density of their combined fields draws in and tightly holds an electron, which is positively charged (+.49973), located at **E**, to create, or define, a neutron, located at **N**.

It's likely that the electron may move back and forth between protons or at times envelop both at once. But the three together still have a negative charge, or a field of decreasing density of (-.49973), that can draw in another electron (+.49973), located at $\mathbf{E}_1$, to achieve a balanced state, in this case deuterium an isotope of hydrogen.

The actual distance to the electron would be over 60,000 times the radius of the nucleus. At the scale depicted that would put it more than 100yds away. The important principle that's trying to be conveyed here is that it's the sequence in which the particles assemble, which is facilitated by the relative densities or actual charge of their fields, that is responsible for the creation of a neutron. Otherwise, you'd just end up with a hydrogen atom [13][14].

(18.2 Atoms vf 8a)



1. HELIUM ATOM

2. NEGATIVE ION (-E)

3. POSITIVE ION (+E)

IONS

The actual charge of an ion is also opposite of convention. If we begin with a ground state helium atom, shown theoretically in a section view through its center, the electromagnetic and gravity fields of its two protons, located at **P**, and two electrons, at **E**, balance to neutralize its charge. Its neutrons, at **N**, already a combination of an electron and proton, remain neutral.

If one of the electrons is removed, as depicted in section view in **2**, the density of its combined fields would be decreased where its relative charge, as calculated in the previous diagram, would be (-.49973), where its gravity fields dominate, which would tend to draw in other particles, making its charge negative.

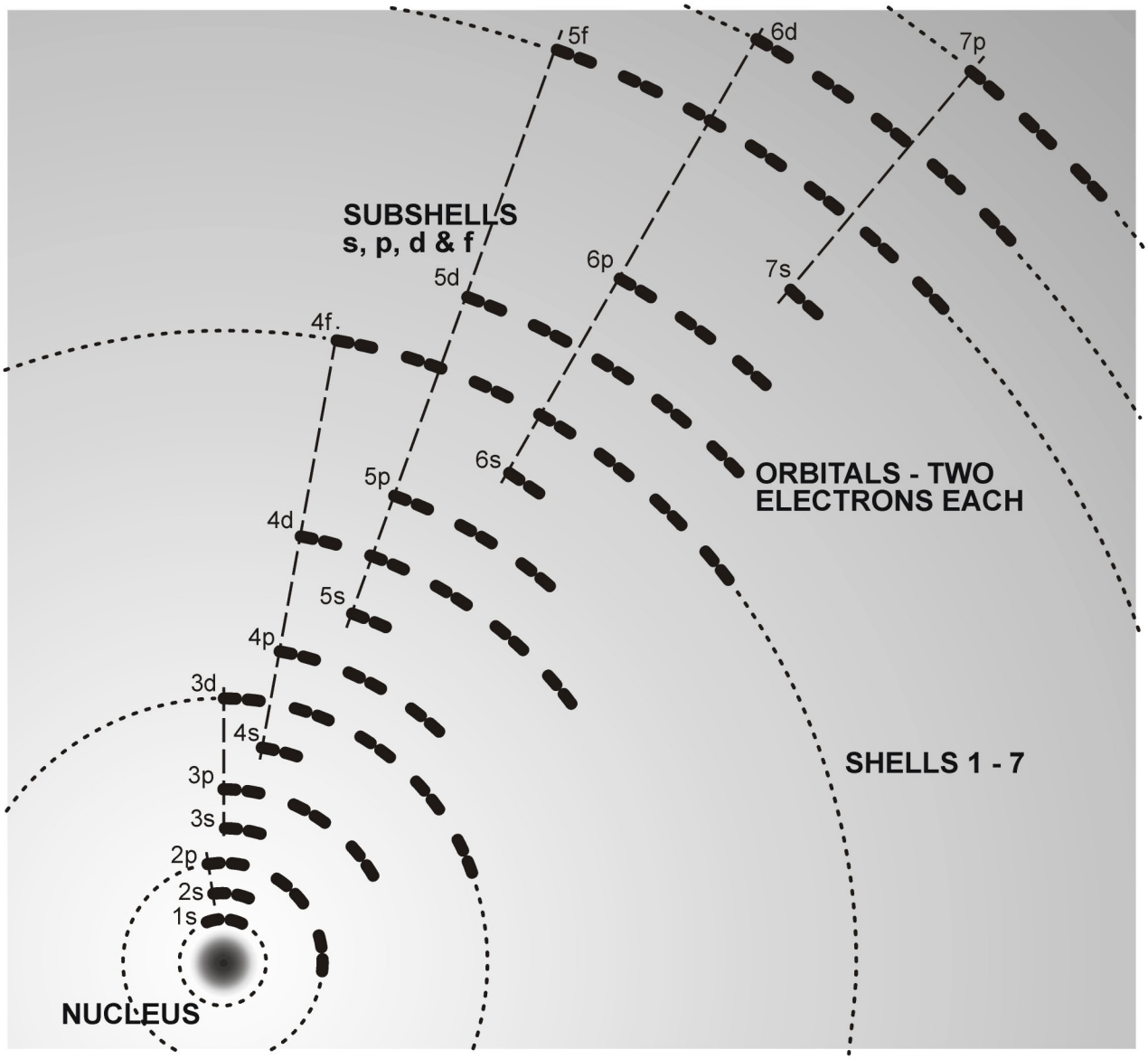
If an electron were added, as represented in section view in **3**, the density of its combined fields would be increased. Its relative charge would be (+.49973), where its electromagnetic fields dominate, which would tend to push away other particles, making its charge positive.

A decreasing density in the universal field, a gravity field, is a negative charge that tends to push inward. The increasing field density of a particle's electromagnetic field is a positive charge that tends to push outward. It's the inherent repulsive nature of a particle's, or any object's, electromagnetic field that mechanically causes them to seek equilibrium in the universal field that innately decreases in density around every particle, or object.

Their reactive search for the lowest density in their combined fields that always lies directly in between them, or toward a common center of mass for multiple objects, causes them to move toward one another in an apparent attraction. It's the same repulsive effect of their interacting fields that pushes or holds them apart when they attain equilibrium.

Protons and neutrons and electrons are not bound together or repelled by imaginary strong and weak nuclear forces that are magically transmitted by unseen massless particles. Gravitation resulting from electromagnetism is simply governing all their interactions [15].

Figure 5.3 (18.3 Atoms vf 8a)



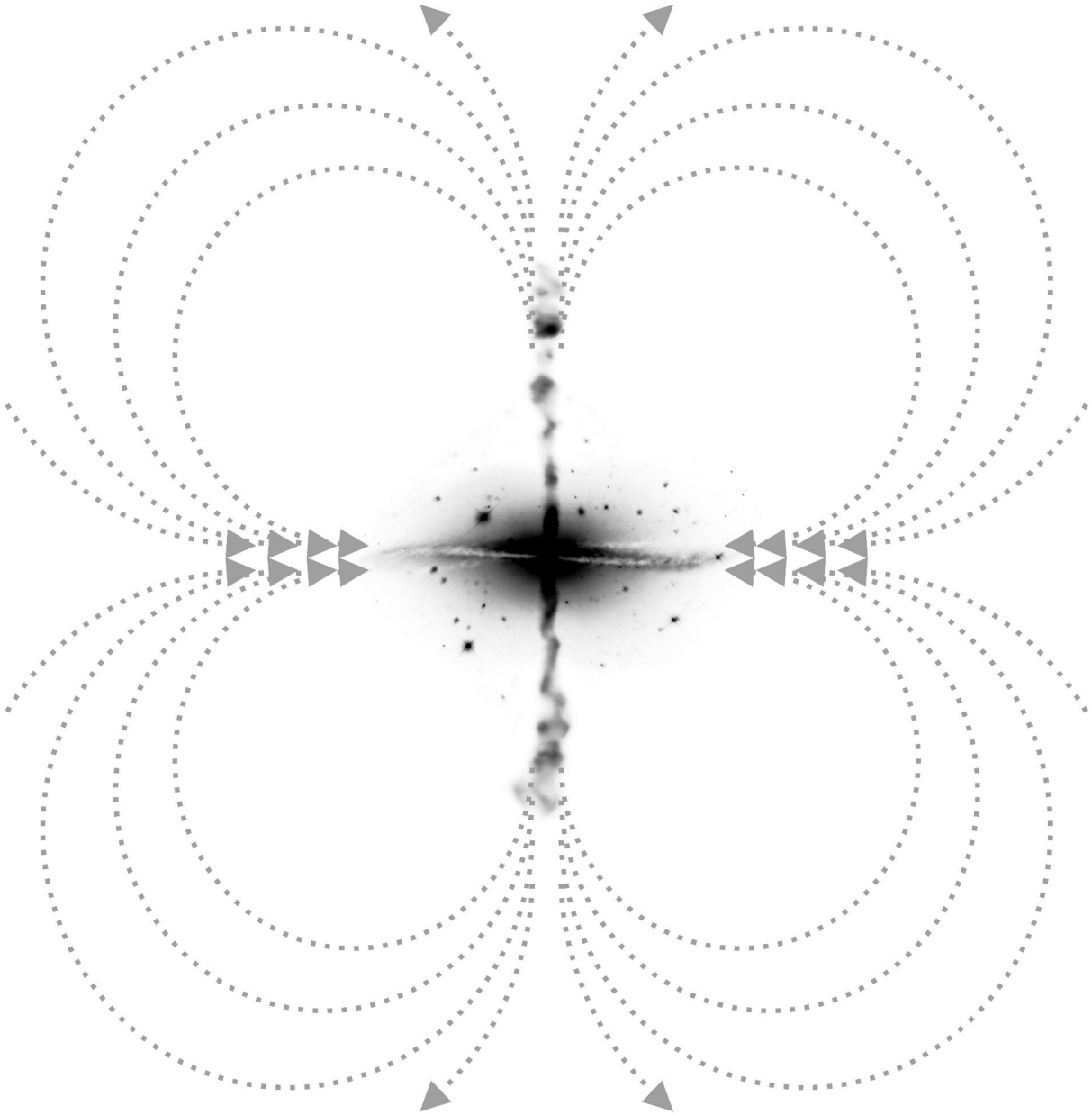
AUFBAU OR BUILD-UP PRINCIPLE OF ELECTRONS

This diagram shows how the electrons of all the known elements theoretically distribute themselves around an atom's nucleus according to the build-up principle. It depicts seven shells (1 -7) and their four subshells (s, p, d & f) that contain either 1, 3, 5 or 7 orbitals. Each orbital consists of two electrons.

Electrons tend to fill lower "energy" levels, or gravitate toward the nucleus, pushed inward and smeared out all around it by the increasing force of the decreasing density of the atom's gravity field, portrayed in section by the inward diffusing background, while the repulsive nature of their electromagnetic fields holds them apart. It always keeps them, along with the protons and neutrons at the nucleus, at their maximum distance from one another, which increases from the center out as gravity's force decreases exponentially.

It's important to note the electrons' outward diffusion. They disperse exponentially because of the geometry of a sphere. It's also important to know that they're not paired up side by side in each orbital as the diagram implies. Their repulsive nature ensures their even distribution over the entire nucleus. The same is true in the outward direction. Gravity's ever-decreasing field density pushes them inward causing them to nestle in between one another, naturally pursuing their most balanced and stable distribution that ends up forming shells and subshells that express symmetrically at each consecutive level [16].

Figure 5.4 (18.4 Atoms vf 8a)



GRAVITY'S PERPETUAL RECYCLING

At the largest scale, protogalactic material begins coalescing spherically, three-dimensionally. Any asymmetry causes it to start rotating, which begins to form an axis. Because the resulting centrifugal force is less at the ensuing poles, it coalesces more readily down the axis toward its center while the more perpendicular material tends to flatten out into the whirlpooling disks that define a fully developed spiral galaxy, shown in side view.

But its coalescing doesn't stop here. Gravitation is a runaway process. It continues unabated facilitated by its exponential condensing that naturally allows its vortex to flatten out. As the material spirals in toward the galactic center, the compression becomes so great that fusion reactions are triggered that begin converting it back into the radiant energy it originated from.

It's then ejected out in huge, high-velocity jets in a bipolar fashion, shown as visible. As the radiation slows and cools, it eventually congeals back into ordinary matter and begins gravitating back toward its or another nearby galaxy, the dotted arrows. The material of every galaxy is subject to this never-ending process of perpetual recycling, which is the real source of cosmological redshift: the Doppler effect from the material's ever-increasing recessional velocity from every other galaxy coupled with our own infall velocity at our own galaxy.

The image is a highly modified black and white negative of galaxy ESO 510-G13 taken by NASA and the Hubble Heritage Team with the HST.

Figure 6 (19.1 G Recycling vf 5a)

Conclusion

If, as most believe, the fundamental constituent of the universe is an infinitely vast field of radiant electromagnetic energy, that like any ordinary field its continuity is uninterruptible and bound to the exponential gradient intrinsic to spherical geometry, and that particles innately condense out of it, then how can runaway gravitation not be the natural outcome? What else can be concluded?

How is it possible that gravity and its long sought-after unification continue to elude us when its solution is no more difficult than simply recognizing the practical, commonsense relevance of these natural, unassuming, axiomatic suppositions? They've been right in front of the whole time, available to anyone who's willing to question orthodoxy.

Discussion

Maybe the reason gravity and its unification have been so difficult and elusive is because our initial assumption about space is incorrect. It's not something. By definition, it doesn't exist. It's the nothingness between objects [17]. So there's nothing there to curve, or to expand, or stretch, or cause light's redshift from stretching. Then we try to meld that nonexistent space with a nonexistent time into an inconceivable four-dimensional "spacetime" [18].

Time also does not exist. It's not an inherent property of the universe [19]. It's a concept we've created through our selection of objects with periodic motion, like the Earth's rotation and orbit or the natural frequency of cesium atoms of atomic clocks, that establishes a convention that we use as a reference.

We then try to make that purely theoretical, four-dimensional abstraction curve two-dimensionally as a nonexistent plane [20]. A plane by definition doesn't exist either. Its two-dimensionality can only define a location that's planar [21].

Curvature is a property limited to one or two dimensions [22]. In three dimensions, any change in a substance can only express as a variation in density [23]. Conceptually, it's impossible for it to curve.

Then we make that curving, two-dimensional, nonexistent plane of inconceivable, four-dimensional, nonexistent spacetime somehow dent underneath three-dimensional massive bodies as if they were all affected by the pull of the gravity of a much more massive body positioned underneath them. The denting would somehow induce their attraction by somehow causing them to roll downhill toward one another despite not actually rolling or being uphill [24]. If this were actually possible, it'd be a mechanical reaction, which act instantaneously [25].

All of this conflicted nonsense is at odds with more unworkable dogma that has gravity propagated by a force similar to electromagnetism that somehow pulls bodies together, acting at the speed of light via waves [26]. But at the same time, that attraction is also somehow mitigated by unobservable massless graviton particles that somehow exist physically without mass [27]. Which if they actually were particles, wouldn't be able to act at the speed of light either. They'd relativistically become infinite [28].

Rarely is any of this entrenched proprietary ideology ever questioned. Ingrained and compulsory, we unwittingly proceed like lemmings under the rote groupthink assumption that it's all true despite its conspicuous untenability in our real nontheoretical world of three actual dimensions.

Declarations

The author certifies that he did not receive any funding, grants, or any type of support from any individual, institution, or organization in the connection with the study or preparation of this work. The author further certifies that he does not have any financial or competing interests in connection with this work or ties of any kind to any individual or organization that might.

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