
Why isn't there a massive 'Negative' proton with simple orbiting positron?

((Addendum: Since first posting this question; I have found that nuclear physics books of the 1960's strongly argued for the existence of the above, but up to that time had not found the above.)) If the above doesn't occur or almost never occurs; perhaps my other recent paper attempting to explain '*similar mass and particle ratios*' might be helpful.

…. Etc., etc., **…Unfinished…**

Why Don't Electron and Positron orbit one-another in a Stable Orbit?

((Addendum: Since first posting this question; I have found that, indeed, such orbits and states do momentary exist, and those have been extensively studied.))

As to how clear the theories are that attempt to explain 'why the Electron-Positron mutual orbit is unstable, but the Electron-Proton orbit is stable'; I'll leave that to the reader. Perhaps my topic below on 'Upper Mass Limits for Gamma Rays' – might be helpful. Or, perhaps, my recent paper attempting to explain '*similar mass and particle ratios*'.

Incidentally, when a photon arises from electron-positron annihilation; I doubt if Coulombic and magnetic forces are strong enough, themselves, to keep a whirling dipole-modeled photon intact!

etc., etc., etc. **…. Un**finished **……**

I've discovered one of the Best 'Useless' Theorems in all of Geometry

Below, we derive and discuss a somewhat intriguing Geometric Theorem. It is better described by pictures (See Fig. 1 and Fig. 2 below), instead of lengthy verbosity**:**

((Addendum: Since posting this topic here; I have developed readable illustrations and proofs of the assertions below; and I would be glad to try to FAX them to any interested reader. The ratio of radii of big ball to small ball, when the big 4-ball array surrounds the small 4-ball array inefficiently (as shown below and with arrays similarly directly) is (5 + sq. root of 24) to 1. The ratio of radii of a big ball to a small ball, if a big 4-ball array surrounds a small 4-ball array inefficiently (not illustrated below and when the big and small ball arrays not directed similarly) is (3 + sq. root of 8). S. S. Savarkar has developed a remarkable generalized proof and chart, not only for a few examples like the below – but extending the topic indefinitely further. My thanks to Greg Volk for also helping me.))

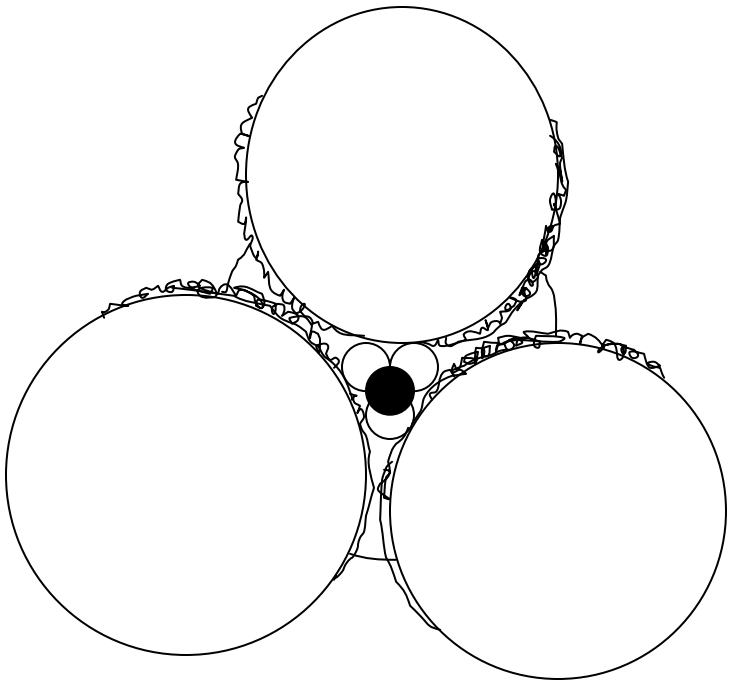


Fig. 1

Shows tetrahedral array of 4 equal balls being straightly inserted and barely **scraping** similar bigger set.)

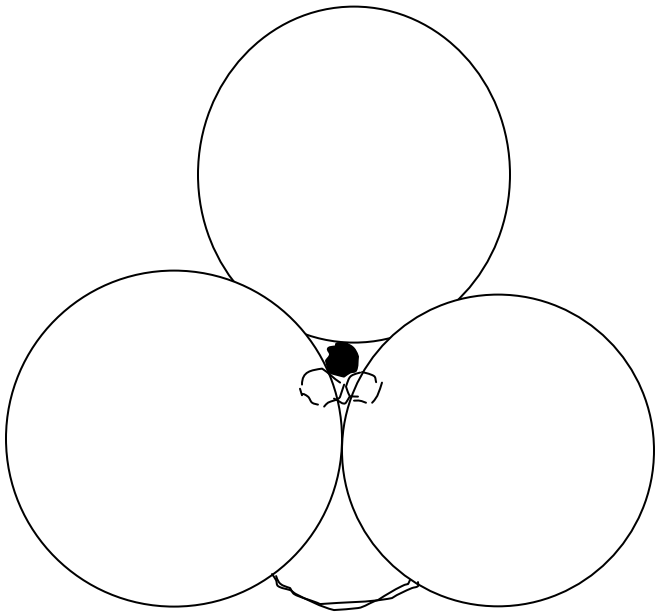


Fig. 2

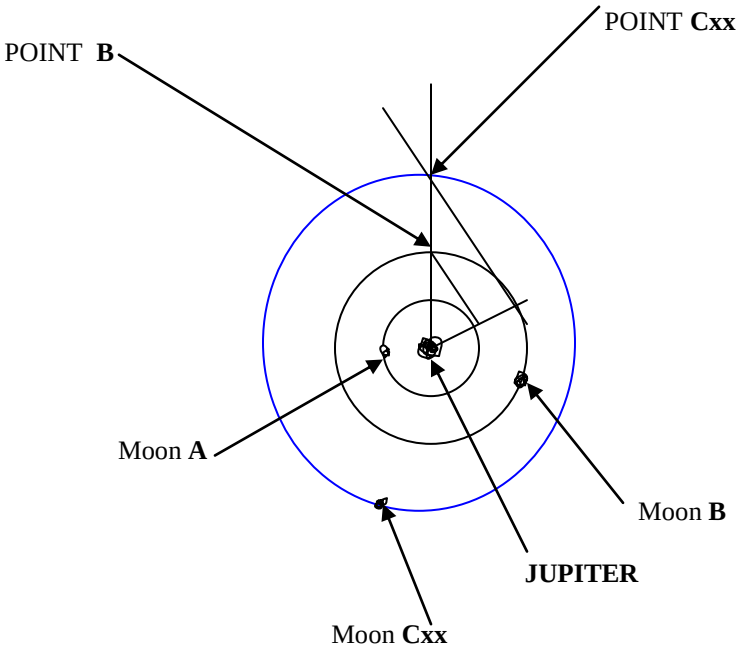
(Shows same-size balls as in Fig. 1; but small array now centered in large array. It has been swiveled so arrays are now directed similarly. Each small ball **barely touches** large!) My latest paper on '*similar mass and particle ratios*' addresses interesting aspect of simpler, 'all-in-same-plain' patterns. I want to develop good '**E**-mailable' illustrations with existing proofs of all of the above, and more, but **...** out of time **...** **Un**finished **…**

Cases in Astronomy of orbital periods of 2x, 3x or 4x times the Inner ones: (Aspects that may help us unify Astrophysics and small Atomic physics)

Jupiter's first three major moons are in 'Laplace Resonance' with one another. That means, in that case, that the orbital period of the second big moon is **exactly** twice the period of the first big moon; and the third is **exactly** twice the period of the second. Such **exact integers** are **no** accident, and are analogous with Bohr atomic orbits, although 'treatment' of the **integers** is different. A skeptic might point out this**:** In those special astronomical cases; one must first know one orbit before roughly estimating the second orbit. But that in the Bohr atom; one arrives at the electron's 'ground-state' orbital without needing to know any other orbit. But that is not really true! In the Bohr atom too; one also needs to know, first, about a 'hidden' orbit, before determining the ground-state orbital: And that crucial hidden orbit is the **ethereal** angular momentum implicitly hidden in Planck's constant -- the quantum that, thus, has dimensions of 'angular momentum'! In this paper, we explore some unifying fundamentals of the universe that help us relate our knowledge of the large 'cosmic bodies' with the small 'micro-cosmic' atoms, etc.

Introduction**:**

Let us first address the subject of the 'Laplace Resonances' of Jupiter's closest three large moons; then other resonances in the universe; and lastly resonances in general. We will coin a new phrase, 'Bronze Ratio'; which relates the ratio of the distance of each of those moon orbits to the other; and a 'Bronze Angle' that relates to the unique common sines associated with the similar right triangles, tangents and hypotenuses roughly associated with 'Laplace Resonances. We will compare some aspects of that with the 'golden ratio' used by Scarborough. Also, see 'Jupiter' in Wikipedia for motion-picture.

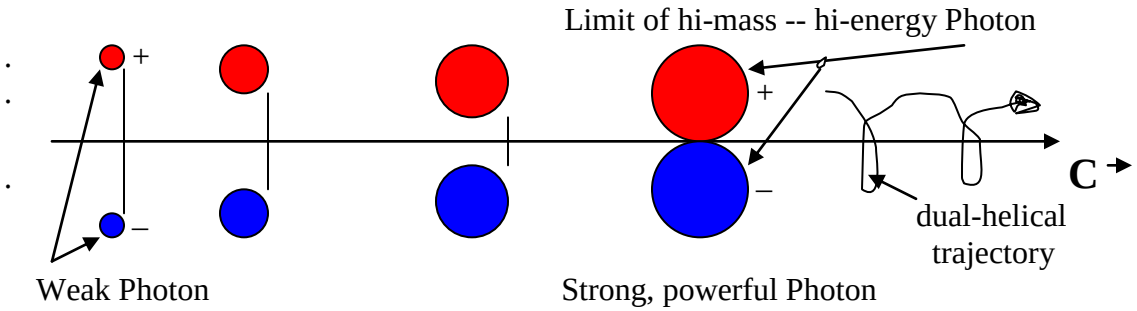


ILL. 1 (The first 3 major Moons of Jupiter -- they exhibit "Laplace Resonances")

Etc., etc., **…, NOT time** to develop paper further, unfortunately **… Un**finished **……**

Upper Mass Limits of Gamma Rays before their Compactness is too dense

We start by considering the formula**:** "Energy equals Planck's Constant times Frequency" – and apply that to high-energy photons, i.e., Gamma Rays. We note that that infers that the wavelength is related to a Gamma ray's size, and the size decreases with increasing energy of a gamma rays. But Compton's work, and others' too, implies that Gamma rays have 'mass', and that that mass must increase with increased gamma ray energy. Bohr's partly successful 'Liquid Drop Nuclear Model' assumes, yet, another limit, i.e., that there is a maximum density limit for nuclear matter! And the speed-of-light helps set another limit (for, say, a 'dipole modeled photon') -- the maximum distance that a spinning or orbiting outer surface can get from a center – since a complete revolution must be accomplished by the time the photon has traveled its one full wave-length! (I.e., the 'frequency' increases with increased energy, while the wavelength decreases!) We explore all the above limiting 'boundary conditions', and ask: "What upper mass limit does that place on a gamma ray?" (Some NPA'ers sketches, models, and inferences – may be helpful. We partially borrow their models, and explore the above in detail. We roughly estimate a maximum gamma ray mass limit, ~ **150 Mev**)! It may even be much less than that -- if the gamma ray is like a pair of mostly 'hollow-holed' doughnuts!



Introduction:

In a sense, a precursor to my discussion is the generally accepted limits of how close an orbiting negative meson can get to proton or nucleus before it 'scrapes' that particle when orbiting. The energy of a gamma ray emitted by a jump from such 'mesic' atom's outer orbit to its innermost orbit -- is very high, but limited! ((Perhaps the width of the orbiting particle's De Broglie wave is also a major factor causing a scraping interference and further limiting the high energy limit of mesic atom emissions; (I'm no expert in mesic atom treatments).))

Anyway, let us first contemplate a model for a gamma ray, somewhat like at least one NPA'er has suggested. Imagine a gamma ray as somewhat like two equal balls orbiting one another at speed 'C'. And that that mutually spiraling pair is also traveling forward at

speed 'C'. Initially, for simplicity; consider those balls as made of high-density nuclear material. And that as the gamma ray energy increases -- the following also occurs**:**
1…More of that material is added to each ball, and the pair of balls grows in size.
2…The time required to complete each particle's orbital journey (around one-another) must decrease with increasing gamma ray energy, because the frequency of orbits (per second) must increase with increasing gamma ray energy.
3…Since the outermost face region of each ball can not exceed the speed-of-light, (in its orbiting speed or sweep)**;** therefore point '**2**' requires that the centers of the two balls get closer and closer together, as gamma ray energy increases, to achieve the increased frequency. (Alternatively, we could have even started by assuming that 'puffy balls' were involved, instead of high density separated balls. And that those puffy balls touched each other; but that their centers get closer and closer together as the frequency, mass, and compactness increases.)
4…Lets us consider that for each 'completed short wave length's worth of forward travel -- that the dipole-like pair of balls must completely orbit or rotate once! ((Since a full circumference exceeds associated radius; the subject radius must be considerably less than the gamma ray's wave length. (That is because one full circumference sweep or curved length must equal our wavelength -- in our photon dipole model) Interestingly, that injects the Greek symbol and value 'Pi', (3**.**1415**…**), into our equation-relationship, even when comparing two simple *straight line lengths***:** I.e., the first line is 'the radial length extending out to the dipole', and the second line is 'one full wavelength worth of distance'.
5....As the gamma ray ball-pairs increase in mass and decrease in out-reach or volume; the balls' material density increases until it reaches the limit – say, equal to the density of a proton (as given in standard old textbooks). I.e., that treatment seems consistent with the concept of maximum density in Bohr's liquid-drop-nuclear-model. (That sets the combined limit of decreasing ball size and increasing ball masses!)

We will show that the highest energy (or so-called mass equivalent) of the Gamma Ray is appreciably greater than an electron, but also appreciably less than a proton. I.e., roughly150 Mev (**if** I've done my math approximately correctly, and my model is fairly close to reality). We will also try to draw conclusions, from the above, relating to the nature of the various 'funda' in the universe**:** elementary particles, photons, mesons, etc.

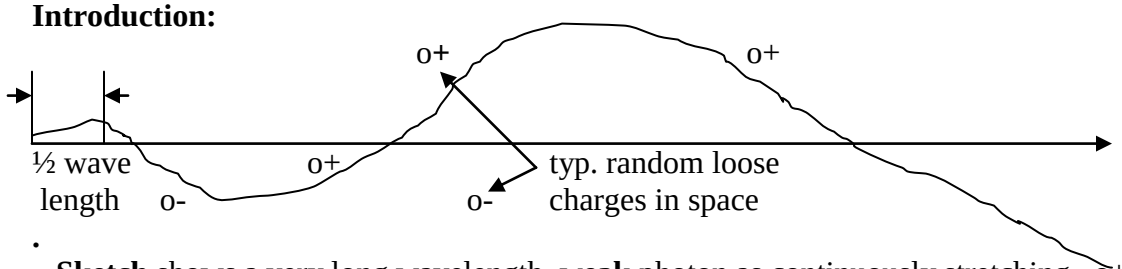
Incidentally, it is quite possible that those orbiting pairs of balls must remain separated by more than 'almost touching' or barely touching! Some NPA'ers have 'doughnut-like models' of electrons, for example, where a hole, or empty spacing, exceeds 'dough' radius by six times. **If my Photon dipoles were doughnut-shaped**, not ball shaped, that would locate most the 'dough' much further from the centerline. So if the dipoles balls were doughnuts instead, that might be like requiring equivalent balls of dough to remain six times their diameter apart. And that would decrease my estimate for gamma ray's maximum mass to closer to the 2 to10 Mev values more commonly (empirically) found.
…… etc., etc., etc., etc.

……. Unfinished **……**

Lowest Mass Limit of a Photon; when it can't manifest its full Wavelength

In a previous article, we discussed the maximum mass limit for a 'photon', due to various side conditions, including a maximum density limit. In this article, we discuss the minimum mass limit for a photon and why that arises. A very low energy photon must be a very low mass photon with a very long wavelength. A very long wavelength photon must also be a very non-localized photon, a photon roughly modeled as a dipole extending outward very widely. Thus, it would have a large equivalent cross-section, and a large equivalent volume. Another major side condition arises because there are loose electrons, protons, and other charged particles scattered over even intergalactic space. In fact, there is an estimated certain large amount of mass in our 'detectable' universe -- scattered over a certain large volume of our 'detectable' universe. All the above results in the following dilemma or 'conundrum'**:** The 'Compton effect' exists. Beyond a certain very long wavelength, a photon (or photon composite) will **likely interact with loose charged particles in space, and thus have its wavelength further lengthened, perhaps before even fully launched**! Thus, we can regard very weak photons as usually inhibited even before achieving its one full wavelength's worth of flight! And thus usually not fully 'exhibitable' in pure form. In this paper, we discuss the merits of using such considerations for generally setting a lowest limit for a viable photon. (Of course, there are likely good alternate methods of approaching the subject).

Introduction:



. **Sketch** shows a very long wavelength, **weak** photon as continuously stretching due to encounters with loose charges even in rarefied intergalactic space; and thus **never** manifesting a **pure** single wavelength over its one full wavelength's worth of travel!

One smart politician once asked, "Is this 'silly season'?" The above approach might strike one as a little 'silly', but actually it is not likely sillier than how the 'Uncertainty Principle' is approached by many scientists, or how Linus Pauling approached certain topics using it.

It turns out as **utterly fundamental** to ask this question**:** "When can a single very weak photon **not** even travel its full wave-length worth of distance without likely losing some of its mass to sparsely scattered charged particles in space?" "And, therefore, that weak photon **not** arriving at the end of even its full wave length worth of travel fully **intact**?" **Ultimately,** that critical distinction must be made**:** I.e., whether an entity really

'travels' (has real 'trajectory' like a nailed-together boat); or whether it hits as a wave (like a 'tsunami' where few, if any original water molecules, near the earthquake source, ever make it to the land hundreds of miles away to cause the damage there -- with their entity present there).

And that issue is what the ancient Greeks debated (the 'Atomists' believing that a real atom, entity, particle, or corpuscle could travel intact, as it is; however the Greek 'Eleatics' school countered that such travel is impossible, i.e., that a pure wave structure of the universe is the reality! Does that sound familiar? i.e., whether light is a 'particle' or 'wave'? And that is why I presented that distinction (i.e., when a photon mass gets too weak to travel far (intact); and thus it does not arrive as it left?) And remember -- all photon particles are **not**, in every case, forever doomed to lose mass! For example, under the lucky influence of gravity, a photon traveling toward the body may even increase its mass, slightly, as if scooping up mass from an ether. (Or mass increased by bouncing away from mirrors moving against it!)

Important: In fact, we can imagine, on rare, lucky occasions – that a photon would arrive at a receiver with none (or almost none) of its origin mass, and instead consisting of a replacement mass nearly equal to its original. In that rare case, it arrived as a wave relative to how it was emitted, not as (the original) particle (logically speaking!). So "how 'intact (with original substance)' that a photon is when it almost arrived, compared to shortly after emitted, seems crucial and relevant to me, even though the answer may have to be given in terms of merely a percent, or a statistical probability of avoiding interaction or collisions that somewhat alter it!

One expert once suggested, after analyzing (very weak) 'neutrinos', to just let neutrinos and the concept of neutrinos 'fade into the aether'. And when a very weak photon finally lengthens beyond a certain length (roughly **one meter's** length); I suggest about the same thing. I.e., just let that ultra weak photon just 'fade into the aether'. (Gravity can cause that too.)

We also note and discuss this: Suppose we have, say, a 1 watt 'AM' radio transmitter and it is sending out a 300 mega hertz broadcast, i.e. a pretty high frequency and a weak transmitter. Then at about 186,000 miles distance or about one second's worth of travel; consider this**:** Each so-called photon (each of about one meter wavelength) would finally achieve for itself – about a full cubic meter free to itself, i.e., without co-inhabitation by other photons.. Thus, consider what is detected at typical, rather close distances to the AM transmitting antenna? What our AM radio receiver would detect is variation from 'extremely great congestion' of photons to just 'great congestion' of photons; i.e., every cubic meter has huge numbers of roughly one meter long photons. And thus each cubic meter of them sweeps by our receiving antenna and affects its electrons.

…… etc., etc., etc., etc. ……. Unfinished ……

The details of several major mysteries in Physics involve trying to establish picturesque models of the details on the micro-level of what gradually occurs during the most fundamental *transitions-of-states* in Physics. ((On the much larger scale, one such mystery was finally settled with the emergence of multi-camera photography, i.e., the famous old question of "whether all four feet of a racing horse are above the ground at any instant?")) So it seems appropriate, in the paper below, to finally attempt to show the picturesque details that unfold in basic micro-sized physics transitions that have historically gone unsolved and maybe even intentionally ignored. We will list all major transitions for which the micro-sized unfolding mystery exists. We may thus note a 'common thread' tying all the different classes of events together. And that might help our insight or our analysis of it all. Even if Heisenberg's Uncertainty Principle may prevent 'filming' the unfolding details; that does **not** prevent us from conjecturing about the unfolding details**!**

Introduction**:**

Below I will discuss four major mystery transitions in physics that seem to be different because they occur in different 'systems'. But I will assert, and show, that they are very much related -- similar in a major way. And I will attempt to give picturesque details as to what is evolving from beginning to end of transition**.**

1…A very small decaying nucleus emits an electron; and the electron develops a rather large (Planck's worth) of spin -- considering that the electron had small mass and initially small size! Therefore the electron must expand greatly -- shortly after being emitted by a nucleus. In other words, because the decaying Nucleus (that emitted the electron) is so comparably small**;** the electron must gradually expand shortly after its emission -- to develop its standard significant spin. That is, if the initially small electron was not spinning at a vastly greater-than-light speed (as it was being released); there would gradually have to occur a fancy Planck's worth of fancy angular momentum transfer, i.e., some angular momentum communication. And thus, presumably, a fancy exchange through an intermediate distance of space, while the electron expanded. Thus the spin of the electron would gradually build up, and the spin of the small compact emitter-nucleus would generally be expected to gradually decrease.

So we will discuss later in this paper what is really likely (pictorially) happening on such a mysterious micro-scale!

2…Suppose one was officiating at an unusual football game -- a 'photon-throwing football-game (and you were standing still at the 'line-of-scrimmage'). Then one would note the following**:** The super-great pass-thrower throws the photon-pass, say, at the speed-of-light --- regardless of whether the football passer is retreating, or standing firmly in place, or even running forward while heaving the 'photon-football'. Let us assume that something (a football-photon) was a part of the retreating passer, but was naturally separated from that passer during the passing. And so the photon traveled forward at 'C' -- relative to the stationary official. I.e., that implies that the passer's

great throwing arm (or something) was momentarily in a forward motion at **faster** than the speed-of-light. In fact, Pauling and some others did accept that -- for small times and distances -- that the speed of light is exceeded (i.e., that quantum mechanics, in those cases, trump Relativity!)

But the challenge of 'moving-photography' or a detailed series of drawing for the above -- is still relevant! And later in this paper, we draw and discuss those details, as I believe they unfold.

3…In the Bohr-model of the hydrogen atom (although no longer generally used) -- a related detailed question could be asked: I.e., whether one uses the Bohr-model (and tries to problematically draw a gradually changing orbit), or whether one uses a replacement -- the challenge remains to draw a time-related 'moving-picture' of the changing details involved. I.e., that means drawing the gradually manufactured and emergence of a photon (or whatever the atom has lost) -- and whatever is correspondingly coming into existence (gained) in space! I.e., drawing**s** of the transition during that transition time.

Again, this paper aims to do that.

4…Some people believe the following happens under certain circumstances**:** When a photon is emitted from the Sun; as it continues to travel away – it loses some of its mass and energy to 'space or gravity'. (And that even occurs in the case of a fast-emitted electron from the Sun, also – it loses energy to 'gravity' too.)

Thus, a photon mass (or even an electron mass) may somewhat 'fade' into space, with a reduction in photon's mass and energy (or even, similarly, for the case of a moving electron's mass). Thus there would seem to be an increase in some mysterious residue left in space! But what are the 'picturesque' evolving details, including that associated with the residue in space?

Again, this paper aims to sketch those 'moving pictures'. This time, the challenge involves the transitions between "mass of 'gross particles' into the 'aether residue'," instead of gross particles into photons!

Important Comments: All four above 'transition' mysteries have one thing in common: Regarding 'beginning' and 'end' states; physics enjoys considerable success in applying 'laws' or 'visualization or both. But – regarding the detailed '*transition' period*', those laws, visualizations, and usually both, ***fail*** for each 'varied' case. (I bet Linnaeus would have appreciated that *common underlying theme*, i.e., 'transition details - failure!') Like a disease, there is a Heisenberg '**treatment**' for the mysterious transitions; but not a **cure**; not a picturesque description; not a real understanding**.**

It is possible that the challenge in all the above has moved some physicists to abandon the conventional notions of 'finite high-density mass particles' with real 'trajectories'. And to, instead, reformulate physics into a totally 'wave-theory model' of so-called mass, and similarly for the entire universe. And thus, such a universe without meaningful

'trajectory-travel'! And elimination of the notion of mass as we have historically conceived of it! But I think that is an 'over-reaction'!

We will help resolve the above mysteries by asking an ultra-basic question seldom asked since ancient Greek times. If we consider material as 'existence', what is basically reasonable for 'existence' to do and not to do? And how could we have naively expected to avoid eventual drastic pitfalls, anyway, when we arrogantly set out to tackle physics and cosmology by ignoring an aether? Or accepting the possibility of the colliding of previously separated material, and thus momentarily infinite forces arising? ((I.e., the philosophical problem of 'continuity', a problem that Einstein alluded to (perhaps a little tardily) in his last publish article.))

Etc., etc., etc., etc., etc., etc., etc., **Un**-finished – regretfully!

Non-increase of Mass with leap to 'C' in positron-electron mergers. How?

Can I send electrons and positions on long journeys through space **at** the speed of light, using almost no launching energy – i.e., without the impediment of huge mass (multiplications) that prevent those particles from quite reaching 'C'? In that latter case, they don't even reach 'C' even when an almost infinite amount of energy assist is applied! Yes, in a sense, I can send them at 'C'! Here's how**:** I just first bring electron and positron together and let them launch one other in the form of a pair of 'Compton' gamma ray 'particles'! And reassemble them into conventional electron and positron when they finally arrive at their far-away destination. But seriously**:** "What special enabling details are happening when such Compton gamma ray is being assembled for launch and launched? We contrast that to nuclear fission**:** There, although neutrons, electrons, etc., etc., or smashed; they don't so specially break in half such that heavy particles leap toward outer space **at** velocity 'C'.

Introduction**:**

An example of the above 'conundrum' is this: The neutron does not break into two or four equal sections with any two equally large sections leaping toward outer space **at** 'C'. But that does happens during positron-electron annihilation. In this paper, we consider that fact, ((together with the previously (unfinished) papers on 'Gamma Ray limits and maximum mass densities', and on 'why electron and positron do not form stable Bohr orbits with one-other, like dual stars' do)). And we will establish the few major reasonable factors that govern the universe! My completed paper on reasons for 'similar pattern ratios and mass ratios' – also discusses some likely related factors.
etc., etc., etc., **Un**finished

Altering our Patent, Copyright, etc., Systems to Aid the Public and Inventor

People like Buckminster Fuller have rightly complained that the National Patent system does not really promote, reward, nor appropriately protect inventors and contributors. And may not benefit the public as much as otherwise. I agree, and I think the copyright system is almost as bad. Below I discuss that, and propose measures to largely fix it.

Introduction:

Progress has often been successfully promoted and advanced by means outside our 'Patent' system. The Wright brothers and Lindbergh were given prizes and awards for their achievements by others (instead of the our federal government) in one or more instance. Too many inventers (such as E. M. Armstrong -- in my opinion) never received but the smallest fraction of what their inventions, work and early innovativeness merited. That was often due to mischievous destructiveness by the federal government and other over-greedy tycoon competitors -- frankly 'robber barons' in my opinion. New things may evolve, like the online encyclopedia 'Wikipedia' and its related Wiki's (financed through contributions) which may somewhat succeed in countering abuses and limitations. That is -- enhancing the common interest, where our National Patent, Copyright, and other rewards system failed us! I would even argue that the 'Internet', as we know it, was late in coming to the general public because of greedy interests and a failed patent-copyright-judicial system.

Another of many examples is when Linus Pauling wisely advocated 'that most people greatly increased their intake of vitamin C'. Pauling was not just **un**rewarded for that. He became, in many circles (including Federal circles such as the FDA) detested, wildly criticized, and 'meanly attacked'; sometimes by whisper, sometimes by stilted researchers conducting stilted experiments, and sometimes by stilted articles written against him or cunning political maneuvering.

On the other hand; sometimes those who hold, or have held, federal government recognized copyrights are over-rewarded. One example is many music recording companies that inappropriately 'scare' the consumer/owner about reproducing them forty years after they were recorded. I.e., that is, while the original music producer (the copyright holder) refuses to reproduce them again and offer the 'old' recording (even transferred onto 'higher-tech forms' -- to the desirous buyer! (Not even at a high, but non-outrageous, price.) Perhaps the modern 'iPods' will create an opposite extreme, almost equally damaging. (I not very familiar with iPods.)

Etc., etc., etc., etc., etc. ……**..** UNFINISHED **……..**

A new Correspondence Principle: For each Physics error, a Political error

Historically, the 'Age of Reason' also brought some progress in 'Natural Philosophy', and that also corresponded with or promoted some progress in 'political philosophy' -- some enlightenment in that realm too. In fact, political innovators like John Locke, Benjamin Franklin, and Thomas Jefferson also engaged in scientific experimentation and/or exploratory reasoning about natural science. In this paper, we try to show that for each fundamentally correct scientific principle or worthy methodology developed – there is a parallel corresponding meritorious political proposition which also gets a positive boost. But science and mathematical physics can also beckon a **non-**circumspect, impatient and rash inquirer into appealing 'pitfalls', misinterpretations, and over-generalizations. And thus, we will also attempt to show that for each fundamentally problematic and flawed physics proposition, flawed cosmological conclusion, or flawed methodology – a **corresponding**, parallel unworthy political behavior is encouraged to evolve. And thus it sadly also gets a boost and an enthusiastic welcome. And thus, that affects national behavior and policies adversely, at least in the short run.

Introduction: Given enough time to develop all above implications, we could likely extend our 'new' correspondence principle to show that flaws in 'Physics' also encourage parallel flaws in Medicine and in Legal-Judicial concepts and their associated processes also. And, sadly, helps to maintain those flaws. Flawed physics paths and flawed thought processes also corrupt other professions, too, to some extent. That is just the way 'connectivity' spreads over in this world; and I know that Kuhn (before NPA), and some NPA'ers since then, have already wisely touched somewhat upon that 'connectivity' issue. (In my opinion, Glen Boschardt has noted for years that "Flawed assumptions of the same feather flock together.")

However, this above topic is a potentially 'hot potato', divisive, and apt to raise blood-pressures! It tends to be somewhat speculative; tends to roam slightly outside the realm of what the NPA was founded to discourse on, there.

Also, because of lack of time to develop the above; it is almost happily left **…**

Unfinished **……**

(More ideas and speculations will be postponed; this paper already being quite lengthy!)

So that **ENDS** this 'brain-storming' session and paper.