

# A New Hypothesis on the Mechanism for Gravity

By Erik Nanstiel

The following paper represents four years of research and thought experimentation into the physics of gravity. It is not intended as a full-fledged “theory,” but as a premise to a more complete theory on gravitation. It is intended to link quantum level gravity to the macro level. I will discuss gravity as a dual-mechanism for mass attraction and spatial expansion, and as a necessary part of this discourse, offer a structure to the fabric of space itself.

Finally, I will talk about how this premise lends itself quite nicely to various possible applications in gravitational control.

My premise for a theory on gravity is directly related to the expansion of the spatial fabric. The spatial “fabric” (as many call it) is composed of tiny, planck-scale singularities that are packed tightly together. Or put simply, it is made up of miniature black holes that don’t “contain” anything.

The most elementary of matter’s particles (or perhaps “sub-elementary” such as Quarks, etc.) move through space by traversing these singularities. As a sub-elementary particle enters one of these quantum-sized singularities, a wormhole (or bridge) forms between the first singularity that was entered (termed hereafter as the “primary” singularity), and the next adjacent singularity (termed as the “secondary” singularity).

The particle begins to traverse this wormhole, which immediately tries to collapse upon the particle. This collapse compresses the elementary particle and stimulates the shedding (or emission) of gravitons\* (see figure 1).

Some of the gravitons immediately escape the wormhole and exit the secondary singularity to move through vacuum space (see figure 2), and aid in

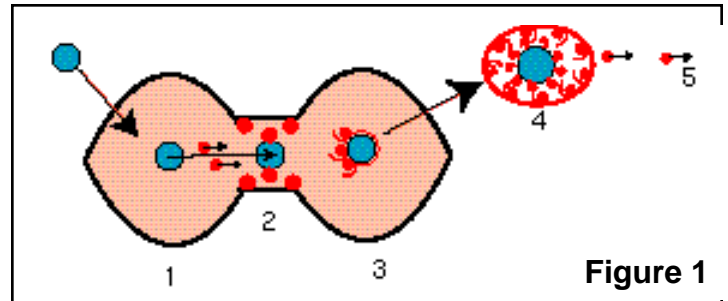


Figure 1

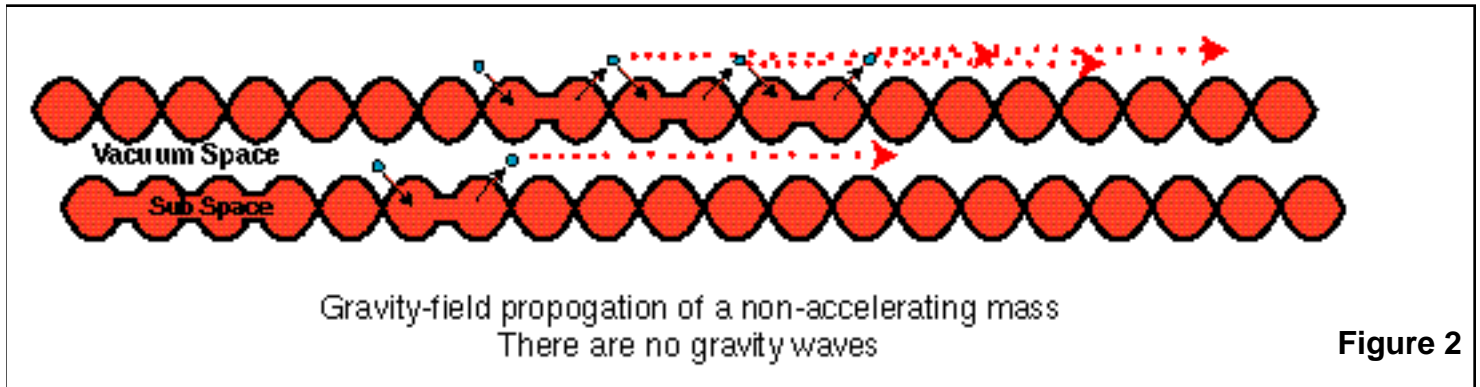
*A sub-elementary particle (shown in blue) enters the primary singularity (1). A wormhole forms (2) and tries to collapse upon the particle. This compresses the particle and stimulates the emission of gravitons (shown in red). Some of the gravitons prop open the wormhole as they begin to expand, allowing the particle to enter the secondary singularity (3). A shell of expanding gravitons (that momentarily stick to the particle) push the particle out. What remains of the graviton shell gives the particle its apparent size (4). Additional gravitons that did not aid in ejection, (5) escape outward into space, forming the particle’s gravitational “field.”*

creating a gravitational “field.” The remaining gravitons that are emitted do not escape, but (due to the compression force of the wormhole) collide with their parent (elementary) particle, and begin to expand. This expansion “props” open the throat of the wormhole, allowing the particle to move through.

The particle then enters the secondary singularity with a coat, or “shell” of gravitons that are in the process of expansion. The gravitons responsible for propping the wormhole open are almost completely expanded by this point, and serve to eject the elementary particle from the secondary singularity.

The particle enters vacuum space with a portion of its expanding graviton shell still intact. This shell of gravitons actually gives the matter particle its “apparent” size, meaning that particles are much smaller than they appear. Just beyond the boundary of this

\*Note: My definition for a graviton may differ from other definitions. In my theory, a graviton (figure 6) is a tightly coiled “string” of brand new spatial fabric, meaning that it is composed of more singularities that are strung together, and wound-up very tightly. So tightly, in fact, that the string (or graviton) is actually smaller than the singularity that once contained it, and the elementary particle that “shed” it.



shell's repulsive expansion, the gravitons that have nearly completed their expansion may act as the strong nuclear force (that causes protons and neutrons, etc. to adhere to one another within an atom). And slightly beyond the range of the strong nuclear force, there may be accountability of quantum gravity toward holding electrons in their orbits.

### The Mechanism for Attraction

After ejection from its secondary singularity, a matter particle still has an expanding shell of gravitons. (see figure 3) This shell will soon dissipate, and the particle will exit vacuum space, falling into the next adjacent singularity (repeating the process I just described).

If a particle should happen to encounter an outside graviton (shed from another remote particle) before it enters a new primary singularity, the following will occur. The outside graviton enters the particle's expanding graviton shell, stimulating the accelerated release (and expansion) of a graviton on the particle's opposite side. This ejected graviton expands very rapidly, pushing the elementary particle toward the

direction of the outside graviton's origin. It is after this "push" when the expanding graviton shell has completed its expansion, leaving the particle. The particle then falls into the next singularity within its course of travel.

### The Formation of Gravity Waves

Gravitons, if emitted from a particle (or particles) that are part of an accelerating mass, will collect together (in bundles, or "packets") in vacuum space to form gravity waves. (see figure 4.) Unexpanded gravitons will not enter the sub-spatial realm within the singularities, nor will they cause other gravitons to expand. This forces them to exert outward pressure on the singularity lattice that is the fabric of space. This warps the spatial fabric as the packets of gravitons move through vacuum space, and away from their parent particles at the speed of light.

**Note:** gravitons from a non-accelerating particle (which do not travel in packets, or cause waves in space) may actually travel faster than light speed, having considerably less resistance from the spatial fabric.

Note: Gravitons are not to be considered particles, but a form of "virtual particles," not to be confused with the virtual particles of the Zero Point Field. Shedding gravitons causes all matter and energy to decay. In fact, all matter (and energy) may be nothing more than a complex compaction of unexpanded spatial fabric. Superstring theory holds that elementary particles may be composed of "strings" that vibrate in various patterns, each pattern corresponding to a specific type of elementary particle. My theory describes elementary particles of being composed of not one, but billions of strings (of planck-length singularities). These strings are tightly coiled, and woven into the other strings that make up their respective particle. Particles of matter and energy may live a very, very long time. So long, in fact, that no one may be able to observe the death of an energy particle in a laboratory, or witness effects of it from deep space.

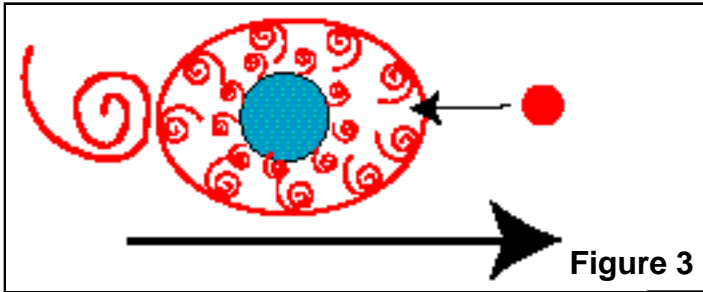


Figure 3

*When an outside graviton (shown in red at right) encounters a matter particle, it enters what remains of the particle's expanding graviton shell, and forces the ejection (and accelerated expansion) of a graviton on the particle's opposite side (shown as a spiral at left). This ejected graviton expands rapidly (becoming pure spatial fabric), pushing the elementary particle in the direction of the outside graviton's origin.*

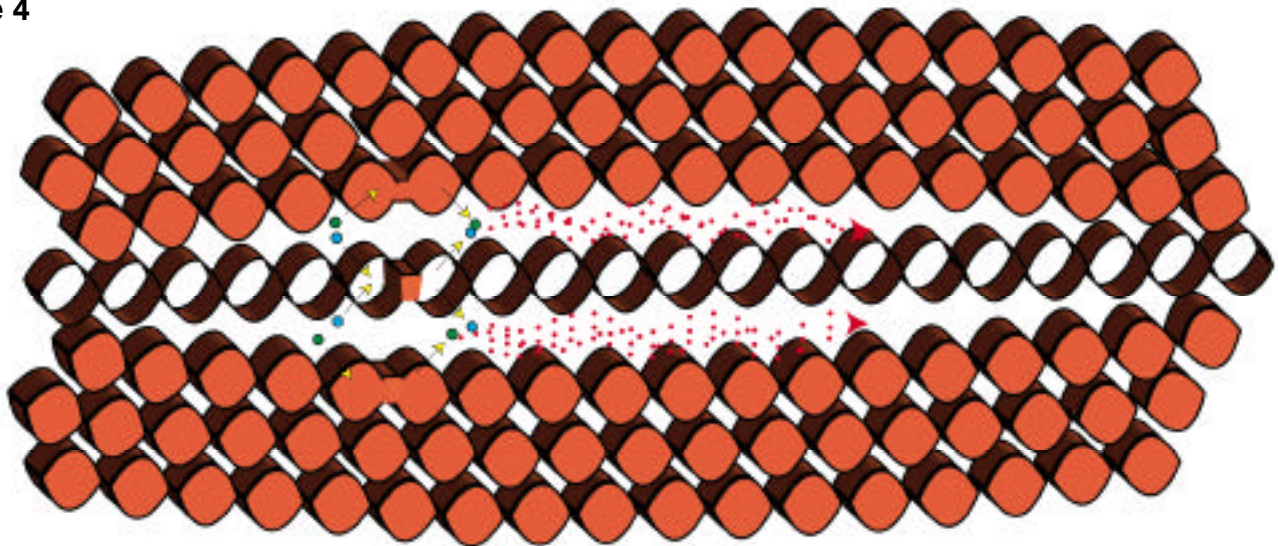
I have just described the basic mechanism that drives gravitational attraction and spatial expansion. In the paragraphs and pages to follow, I will attempt to describe what this theory predicts about inertia, gravity on the macro level and magnetism. Later, I will describe other applications for gravitational control that this theory predicts to be possible.

## Inertia

Although the concept of inertia was first coined in the 17th century by Galileo, all attempts to define its "mechanism" have (to date) failed. Even Albert Einstein tried and failed to show that inertia was related to some arrangement of matter in the universe. One of the current approaches (led by Bernhard Haisch of the Lockheed Palo Alto Research Laboratory) to explaining inertia concerns the "Zero Point Field," where an all-pervasive and evenly spread electromagnetic energy (quantum vacuum fluctuations) resists the acceleration of objects within it. It is described as exactly similar to a Lorentz force -- where a charged particle is deflected as it moves through a magnetic field. For inertia (according to Haisch's theory), it is the quantum vacuum fluctuations of the spatial fabric that produce the magnetic field, and it is the charged subatomic particles making up objects that feel the Lorentz force. The larger the object, the more particles it contains, and hence the stronger the resistance and the greater the object's inertia.

I am uncomfortable with this theory for inertia, as it clearly seems separate from the mechanism governing

Figure 4



**Gravity Field propagation of an accelerating mass.  
Spatial gravity waves are caused by large packet-emissions of gravitons exerting an outward pressure.**

gravity. Perhaps there could be a slight “Lorentz force” resistance, but I do not feel that it could be responsible for the entire strength of inertia. The beauty of the mechanism described earlier in this paper is that it provides not only a good mechanism for both gravity and spatial expansion, but as a matter of course, includes an explanation for inertia, which I will now discuss.

According to my theory, inertia results from the expanding “backwash” of an object’s gravitons during acceleration. Let’s look at that. When an elementary (or sub-elementary) particle exits a “secondary” singularity, it still possesses a shell of gravitons that are in the process of expanding. Any other gravitons shed by the particle speed away in the direction of the particle’s travel. During acceleration, however, the process is a little different. When a particle accelerates, its gravitons are shed faster (in greater frequency). These gravitons collect to travel in packets and, acting like pressurized gas molecules, exert an outward pressure on the surrounding spatial fabric, forming gravity waves. These gravity waves travel outward (conically) at the speed of light (as expected). During the initial formation of the gravity waves, however, the parent particle collides with some of the “packet” gravitons before they could get out of the way. Those gravitons that collide with the particle expand in front of it, creating a “backwash,” or mild backward push. This backward push is (of course) weaker than the force of the particle’s acceleration.

Should a particle be able to “reach” the speed of light, it would not experience “infinite mass” as often mispredicted by physicists citing Relativity. It would, instead, have all of its graviton emissions focused in a one-dimensional line ahead of it, and hit a back-wash of expanding spatial fabric halting further acceleration. If this particle were part of a larger object (mass), the mass would: 1.) experience a violent backwash of expanding spatial fabric, and 2.) evaporate into its component energies as a result of all of its particles’ graviton emissions being focused forward in a 1-dimensional line (rather than holding the object together).

## The Gravitational Field of a Rotating Body

Gravitational fields become much more interesting when in motion (of course...when aren’t they?). As stated before, particles only shed gravitons in one direction at any instant. If a particle is coasting in space (assume it is not part of a larger mass), it is shedding gravitons toward its direction of travel. If it is accelerating, then gravity waves will result from the bunching of its gravitons. We know that all objects in space are both coasting AND accelerating (as is typical with an object in orbit). The same is true for particles within a rotating mass. If you spin a sphere (for instance) on one axis, its particles have a radial acceleration vector (toward the axis of spin) and an inertial vector (tangential to the axis of spin). This fact sheds light on two components to a gravity field; one component that creates gravity waves, and another that does not. The component that forms waves propagates at the speed of light. The component that does not form waves may even propagate faster, having no apparent resistance.

I wanted to discuss gravity of a rotating body for one exciting reason; Rotation isolates (to a degree) the inertial mass of an object into a more two-dimensional plane. More of the mass’ particles are shedding gravitons (more of the time) in a plane. Why is this significant? Researchers interested in electro-gravitic propulsion can utilize this isolation! (*See the section “Electrogravitics”*)

If not for inertia, rotation of a disk or sphere (on one axis) would cause the poles to experience a drop in gravity. The equator, then, would gain gravity. If one wanted to levitate an object by cancelling its gravity with respect to the Earth, the following would be necessary: 1.) set up the isolation of an object’s inertia into more of a plane, and 2.) lower the object’s inertia, allowing the poles to lose gravity. Lowering an object’s apparent mass can be done by compressing its gravity waves. (*See the section “Electrogravitics”*) There are enough gravity waves from the acceleration vector that, if compressed, would allow a large enough drop in the object’s gravity to effect levitation or propulsion.

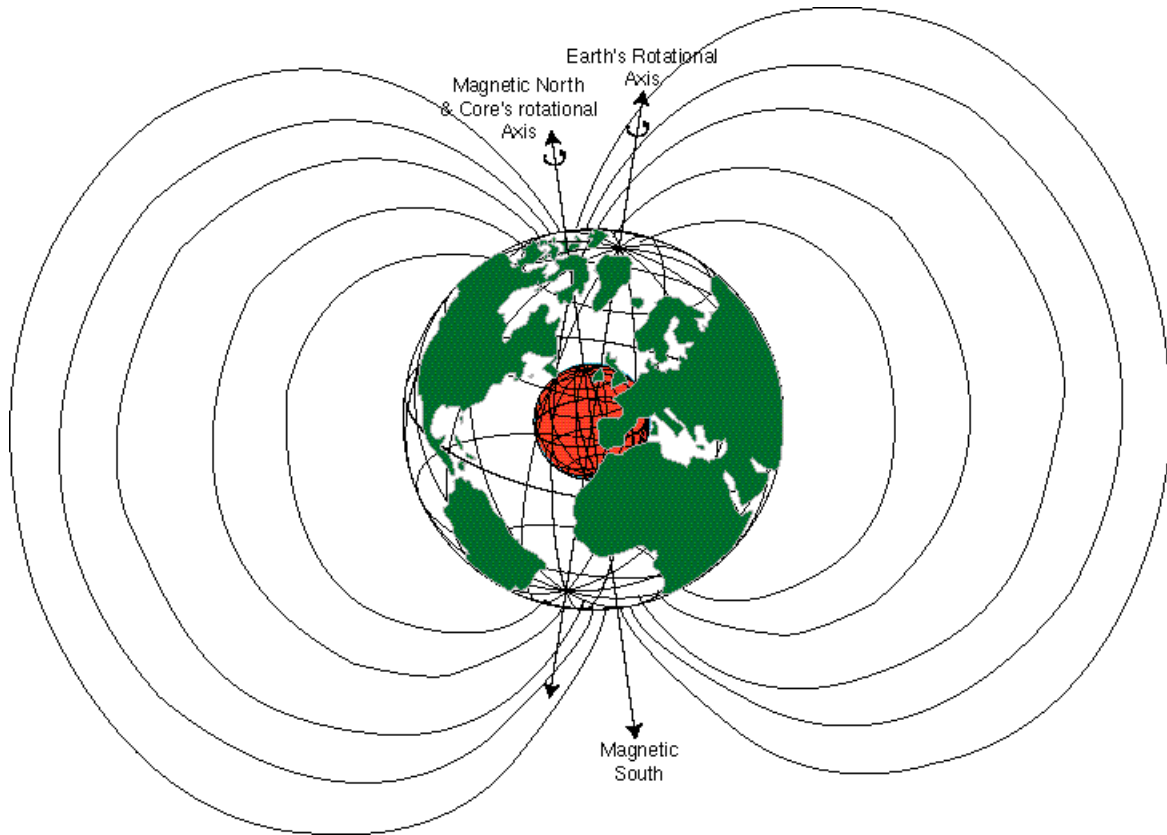


Figure 5

## Magnetic Field Formation Relative to the Gravitational Force

A magnetic field forms when a charged, electrically conducting medium (such as the earth's molten metal outer core) is spun on its axis. The combination of both the acceleration and inertial vectors compresses the electrons within the static charge into their wave-forms. The compressed electrons (now a magnetic field), then behave as though they don't recognize the rotation's inertial vector. In other words, they behave as though the sphere's poles HAD experienced a drop in gravity. (Remember, if not for inertia, spinning an object would reduce the poles' gravity, and raise the equator's gravity.) Once the electrons are compressed in this manner, they accelerate out of the point of least resistance which is the gravitationally-weaker poles (from the magnetic field's point of view).

If a conducting solid intersects the magnetic field, the entire difference in the relative strengths between the pole's gravity and the equator's gravity (from the

magnetic field's point of view, remember) gets focused on the intersecting conductor. This is typical magnetic attraction, but until now...not understood as merely an amplified form of gravity. And of course, everybody knows that if an intersecting conductor MOVES through a magnetic field, there is electrical current. The electrons, in this case, become decompressed (gravitationally) and leave the field...becoming electric within the intersecting conductor.

(Note: I tend also to believe that all E-M radiation/energy may be similar to electrons in composition...but are permanently gravitationally-compressed. This, in effect, creates a virtual mono-pole...which would be a particle with one magnetic pole and an incessant urge to constantly accelerate against the fabric of space.)

*(Note: I believe that the Earth's molten core gains a static charge from friction between it and the outer layers of the Earth. I believe that the friction happens as a result of the core and the outer layers spinning on different axes...possibly from a time*

*when Earth was knocked off its axis by a colliding comet or asteroid in the distant past. That the core and outer layers spin on a separate axis may be supported by the fact that true north is never magnetic north. If my theory on planetary magnetic field formation is correct, then this is an accurate prediction. See figure 5.)*

## Electrogravitics

How does one control gravity with electricity? It's not that difficult. This is where gravitational waves and their frequencies become useful. As I've mentioned, individual gravitons (emitted from an accelerated object/particle) collect together to impose waves on the fabric of space. Everything in existence has its own gravity waves, including electrons. The problem in electrogravitic propulsion is this: If acceleration changes the gravitational field of an object, how can you do the inverse: How can you change the gravitational field of an object to produce acceleration? That's the whole problem, and the answer is simple.

Suppose you wanted to reshape the gravity waves coming from an object, and redirect them...consider this: If you had an object, or craft, with an even and smooth electrically-conducting surface, you could give it a very powerful electro-static charge. Since the object would have its own gravity waves (which are larger [lower frequencied] than an electron's gravity waves), maybe you could flatten them with the smaller, higher-frequency gravity waves of the electrons you use to charge the object with!

Here's an example! In the ocean, it has been observed that during a storm, large ocean waves would flatten out during a very heavy, torrential rain! That's because the tiny little ripples caused by the rain drops break up the SURFACE TENSION of the larger, more organized ocean waves. When you break a wave's surface tension, it will flatten. This is elementary. And the same goes for gravity!

The tiny little gravity waves of the electrons (in an electrostatic charge) "break up the surface tension" of the larger gravity waves of the object, or craft. (a

saucer shape would be PERFECT) In actuality, the static charge serves to compress the gravitational waves of our "flying saucer," to make it lighter. And with some careful manipulation of the static charge, you could change the shape of the saucer's gravitational field, and cause it to accelerate in any direction you wanted!

Now let's get really exotic! Ask yourself this question: What if you compressed an object's gravity in all directions, suppressing (to a large degree) the emission of gravitons? The answer is this: You would prevent the component particles of an object from entering vacuum space. The object would, in other words, become folded within the spatial fabric, invisible to the outside world, and transparent to all other matter. In essence, it would be within its own singularity-collective, and free of encountering outside gravitons, would not experience time at the same rate as the outside world. Why? Because time can only be experienced during the uncoiling (or expanding) of gravitons. Why else would astronauts travelling at near the speed of light age more slowly than we do? Because their speed compressed their graviton emissions, narrowing their "field of reception" for outside gravitons. This has the effect of partially shielding them from the normal time flow of the outside world. Their component particles may even have decayed less.

But back to the transparency with matter; If an object's gravity field were omni-directionally compressed strongly enough, the object could move through solid matter as though it were travelling through a spatial wormhole!\* Any object could be compressed in this manner (although it will be sometime before technology discovers how). If I had a gravitational wave-compressor that I could point at things, perhaps I could compress a wall, and walk through it? Absolutely.

### Side Note:

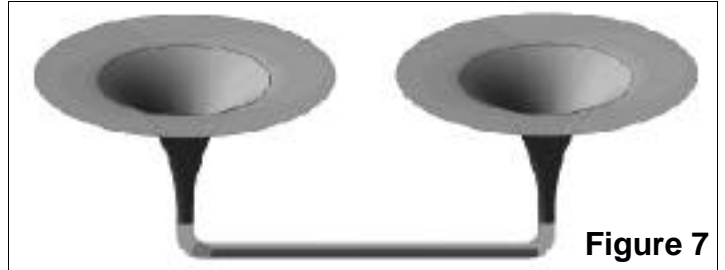
A matter particle is much smaller than it appears to us. What we witness are the expanding graviton shells that emanate from particles.

If not for graviton shedding, a particle could not move

through space. It would remain within a planck-scale singularity forever, being its own baby universe. It would not be able to traverse wormholes that might form with adjacent singularities, as it would have nothing to prop those wormholes open. The universe as we know it would not exist, and there would be no “laws of physics.” Gravity, therefore, is responsible for everything!

Matter is, in essence, “melting.” It is somewhat analogous to an iceberg in the ocean, melting as it moves. The iceberg is merely a frozen piece of ocean. A matter particle, on the other hand, is a dense compaction of spatial fabric. It can only move by virtue of its decay!

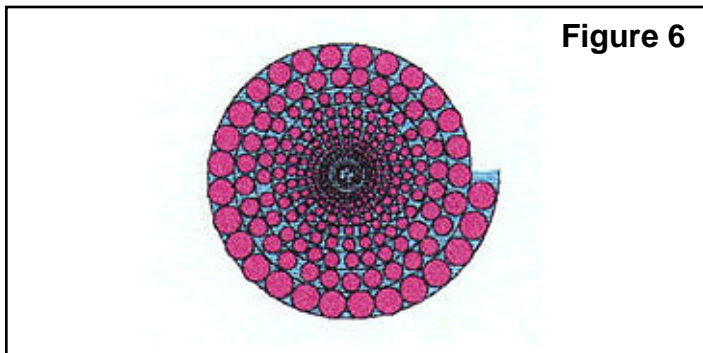
Now that the basics of this gravitational hypothesis have been laid out, I would like to address the subject of the “Zero Point Field,” which I alluded to earlier in this paper. Please refer to the next page, for this topic.



**Figure 7**

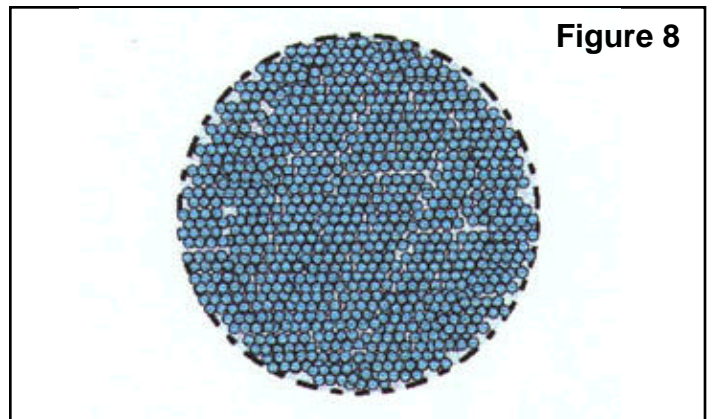
*\*A Macro-scale wormhole (one that is formed between two “black-hole style” singularities) is an impossibility. Two extreme gravity wells cannot meet across interstellar space to form a traversable tunnel. The expansion of the universe’s spatial fabric creates an unstable tidal environment that interferes with (would-be) wormhole travellers’ chances to induce a balanced gravity-field compression necessary for sub-space travel. This is extremely similar to the limitations imposed on wormholes from in-falling radiation. Even photons can collapse a wormhole throat from the tidal instabilities they create.*

*This is not to say that another approach isn’t possible. Gravitational field compression at the quantum level (using a high-powered electro-static charge) can force an object to stay in subspace, creating (essentially) its own wormhole.*



**Figure 6**

*A Graviton, shown above, is a tightly coiled string of planck-scale singularities. It will expand into its final state as spatial fabric, when it encounters an elementary particle.*



**Figure 8**

*An elementary particle, shown above, is a dense compaction of billions of fragments of spatial fabric. The fragments are tightly coiled strings of singularities. These coiled strings are called gravitons.*

## The Zero Point Field of Energy

The “Zero Point Field” refers to what science considers to be a sea of intermittent, virtual particles known as quantum vacuum fluctuations. These particles flit in and out of existence, and pervade the spatial fabric throughout our universe.

Bernhard Haisch, of the Lockheed Palo Alto Research Laboratory, uses quantum vacuum fluctuations to describe inertia. Other physicists also have attempted to explain gravity using the ZPF. “Free energy” theorists have hopped onto the ZPF wagon in an attempt to devise new and cheap methods of extracting this energy as an alternative power source.

In this section, I wish to discuss exactly what the ZPF is and how it relates to our physical existence, gravity and the spatial expansion of our universe.

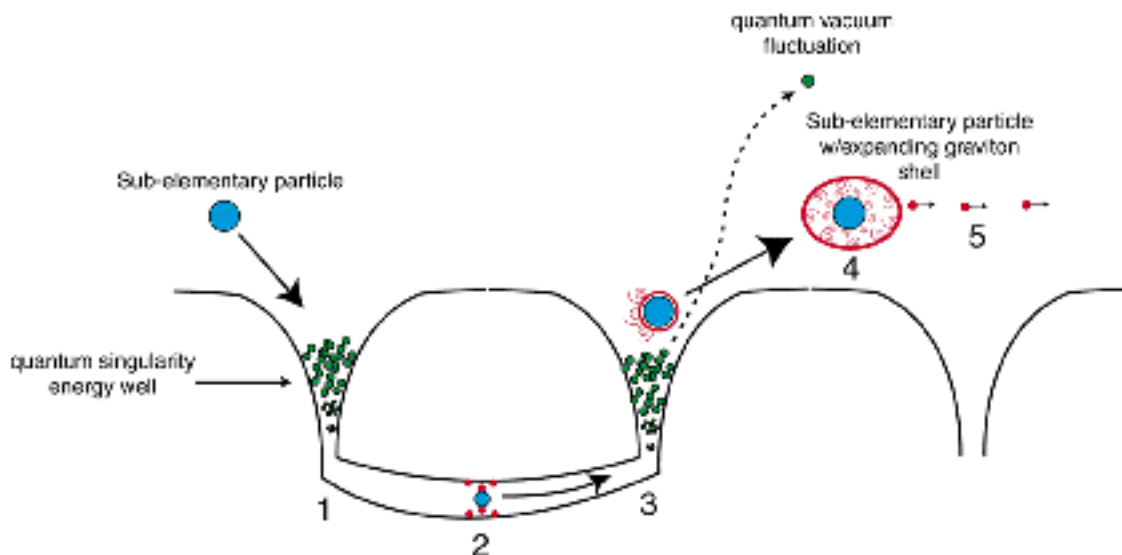
As previously noted, expansion of the universe’s spatial fabric occurs when gravitons (previously shed from sub-elementary matter particles) encounter *remote* matter particles and expand to join the quantum singularity lattice (that is the fabric of space).

This expansion depends upon the ability of sub-elementary matter particles to routinely escape the quantum singularities they traverse. (See figure one, along with its explanation)

This “escape” is made possible by 1) an expanding shell of gravitons that pushes against the sub-elementary particle and 2) an inherent “energy density” within each quantum singularity that prevents graviton-shedding particles from occupying, and getting trapped in, the singularity’s core. This “energy density” consists of densely-packed energy particles that occupy the singularity’s core, yet do not shed enough gravitons to escape the core.

An interesting thing occurs, however, when sub-elementary particles enter the singularities. For each sub-elementary particle that escapes a (secondary) singularity, there is a virtual particle (that once occupied the singularity’s core) that “goes along for the ride,” and escapes with the S.E. particle. Virtual particles DO shed gravitons, but in very low amounts. They shed just enough to 1) allow sub-elementary particle’s to remain “buoyant” within a singularity, and 2) to occasionally hook a ride with the ejection of a sub-elementary particle or photon.

Figure 9



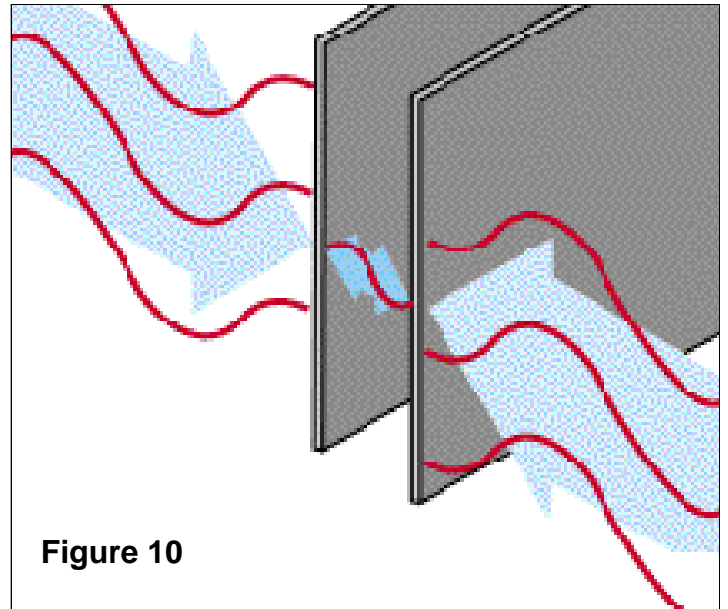


Each virtual particle that escapes, however, upsets the balance of the quantum singularity's energy density, and leaves a "hole to be filled." This has the effect of either pulling that same virtual particle back in immediately, or stealing a piece off of a sub-elementary matter particle or photon. If the escaped virtual particle manages to elude its singularity of origin, it will soon fall into a vacant spot within another singularity's core. *Note: all quantum vacuum fluctuations occur within the presence of matter or energy waves.*

But for a time, this virtual particle pops up into vacuum space as a "quantum vacuum fluctuation." (See figure 9). These fluctuations are responsible for the "Casimir Effect," whereby two perfectly reflecting metallic plates act as filters to large wave-lengths of light by only allowing smaller wavelengths to enter between the plates. The plates, therefore, have fewer quantum vacuum fluctuations between them, than they do on the outside. These outside vacuum fluctuations push the two plates together. (see figure 10).

There are attempts in both the private and commercial sectors to extract energy from the Zero Point Field, which is certainly possible. Problems can occur, however, with this type of energy extraction. For one thing, the energy will find a way to be replaced; usually borrowing thermal energy from the environment. Some work in this field (where experiments on this type of extraction have allegedly succeeded) reports a "cooling effect" near extraction devices. If these reports are accurate, then we have support for this theory. If, for some reason, energy is extracted from a local region's quantum singularities faster than it can be replaced by ambient thermal energy, then the replacement energy will be stolen from any ambient light waves, or molecular energy from the device itself. Needless to say, the more efficient such an extraction device is made to be...the sooner it could "break down," depending upon its ambient energy environment.

It is possible that "free energy" devices, once used en masse, could create an alarming environmental crisis.



**Figure 10**

As mentioned previously, space can only expand as a result of the fine balance between a quantum singularity's energy density and a sub-elementary particle's ability to shed gravitons. If you had a region of space where quantum vacuum fluctuations were over-harvested, the spatial fabric would become "energy hungry." This could have the effect of accelerated molecular decay on matter, and possibly some slight effect on an object's relative velocity.

I invite any comments or questions on the topics contained within these pages. I may be reached at the following e-mail address: [nanstiel@flash.net](mailto:nanstiel@flash.net)

Sincerely,

*Erik B. Nanstiel*

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