

Physics of Subspace Geometry

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Synopsis

The physics of subspace geometry is a bridge between classical physics and neoclassical physics.

Matter and light are manifestations of subspace interactions. A subspace is a singularity space that exists outside of normal space. The universe exists on the boundary of these subspaces, where they touch each other. The subspaces carry the energy vibration of matter and light.

Here is a simple protoscience theory that has the means to connect classical physics, gravity, Quantum Mechanics, Relativity, Electromagnetic, and Nuclear Physics into a unifying theory of physical interactions.

Description of Subspace

A subspace is a two dimensional space who's inside is larger than it's outside; the larger the circle, the smaller the outside circumference. It is different than anything that we have seen in the physical universe.

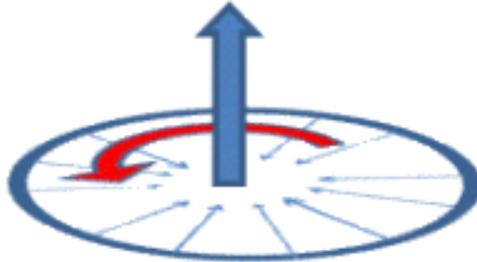
It has a force on the outer circumference of $\frac{nhc}{2\pi r^2}$ where n is an integer number {1..infinity}, h is plank's constant, c is the speed of light, and r is the radial distance from the center of the circle to the outside as measured in regular space. There are two different types of subspaces depending upon the direction of the force.

Note that the force is only felt on the outside boundary and the outside boundary is the only part of the subspace that touches regular space. In fact regular space is created by these subspaces' outside boundaries.

A dark matter particle is a single subspace particle. A sourcing subspace particle will expand pushing all other particles away from it with a force inverse to its size. A sinking subspace is shrinking in size but its force is growing. So the sourcing subspaces affect the universe as a whole separating star fields and galaxies but sinking subspaces may cause

violent, localized distortions. Subspaces appear to have no mass, gravity, or charge that we associate with elementary particles.

Matter and light are generated from two subspaces interacting with each other in such a way that they are smeared (blue arrow) in the direction of the other subspace's spin (red arrow).

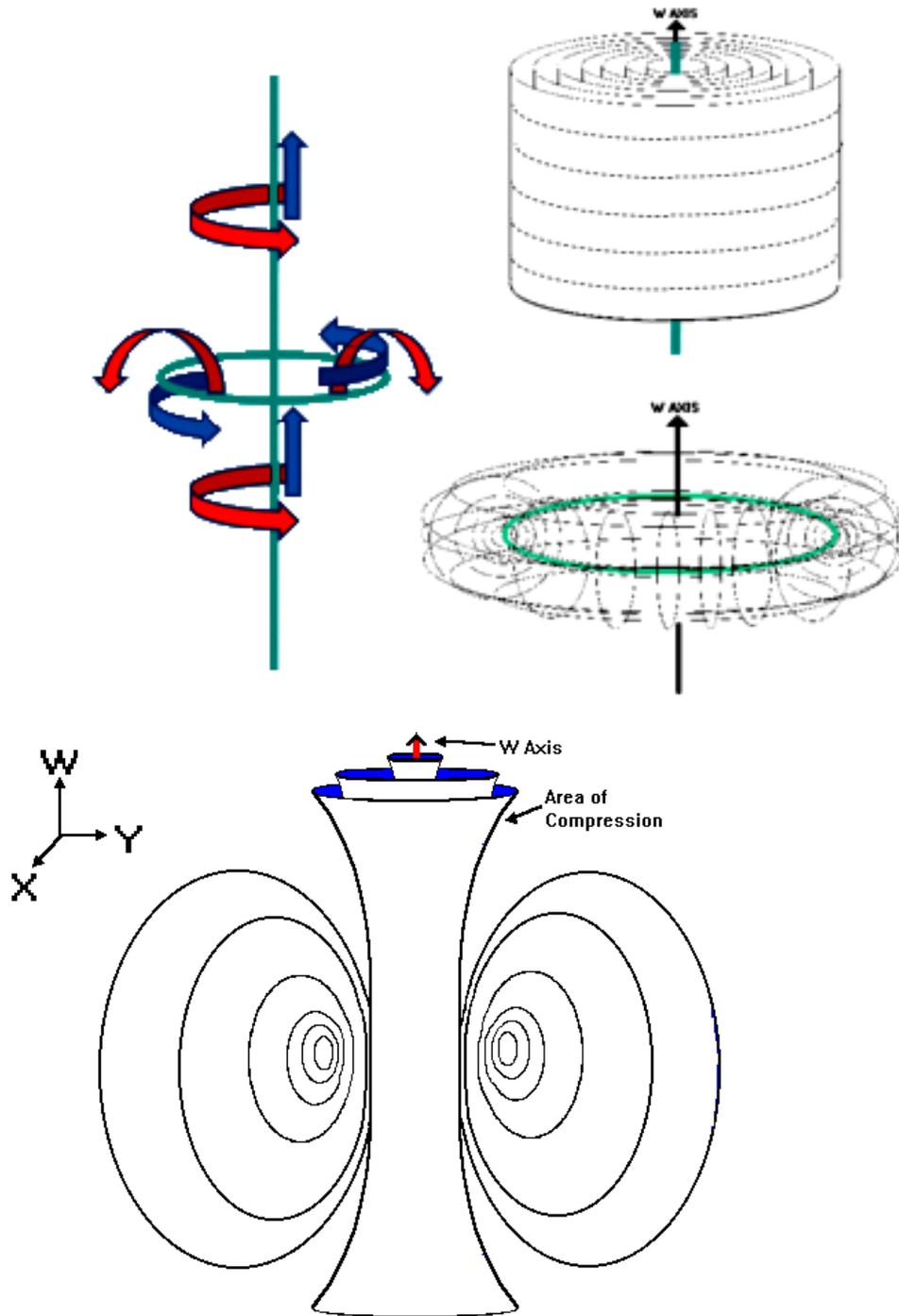


Model of Matter

A model which is comprised of two subspaces that are locked together is based upon a line and a circle. The innermost subspace is a cylindrical shape subspace along the fourth dimensional axis, identified as the W axis. This is a real axis not the time axis used in Relativity. Instead of having just one center of infinite space, there is an infinite set along the W axis. The space is concentrated inward toward the W axis. The outermost subspace is a donut shaped subspace surrounding the innermost subspace at the $W=0$ position. Instead of having just one center of infinite space, there is an infinite set along the circle in the center of the donut. The space is concentrated inward toward circle.

The overall particle model consists of these two subspaces in conflict with each other. These are two dimensional objects that are being smeared across another dimension perpendicular to their space. The inner subspace is causing the outer subspace to wrap around it. The outer subspace spin is causing the inner subspace to exist on the W axis line.

Now picture the line subspace expanding in width and the ring subspace trying to expand. There would be an area where they would stop each other. This is called the area of compression. The forces perpendicular to the area of compression from both these subspaces are equal and opposite keeping the subspaces locked in place. They map out a parabola hourglass around the W axis which is equal distance from the W axis and the circle. Because the distances are equal, the forces are equal and the perpendicular parts of the forces are in balanced.



If you add a second spin to the particle, a second circle around the W axis with a different dimension then this Area of Compression becomes a volume that is the space described by a simplified version of Einstein's General Theory of Relativity (shown below) for the case of light being drawn in by gravity. And in truth this is normal space, the space we live in, curved by the effects of gravity.

$$[1 - (4GM)/RC^2] d(CT)^2 - dR^2 = dS^2 = 0$$

Where

$$d(CT)^2 - dR^2 - dW^2 = 0$$

This is a mathematical description of the volume of compression where G equals the gravity constant, M equals the mass of the particle, C equals the speed of light, T equals time, and R equals the radial distance out from the center of the particle.

The basic concept is at every point in time and space there is a change in position in time and space that creates a velocity change. So CT new = (1 - 2GM/RC²) CT previous and R new = R previous. The velocity change is 2GM/R when (GM/RC²)² is very small. The change in velocity with respect to time, acceleration, is GM/R² which is Newton's Gravity theory.

Path of Light Across Four Dimensional Space

1) Einstein's General Theory of Relativity

$$dS^2 = \left[1 - \frac{4GM}{RC^2} \right] d(ct)^2 - dR^2 = 0$$

2) Adding a fourth dimension W to the three dimension R the radial distance from the center of a particle

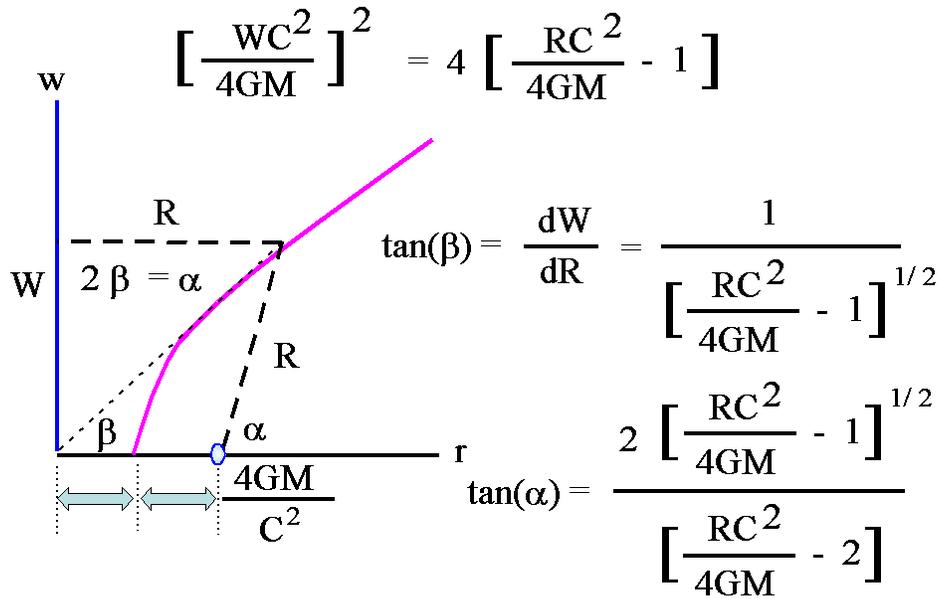
$$d(ct)^2 = dR^2 + dW^2$$

3) Adding the two together

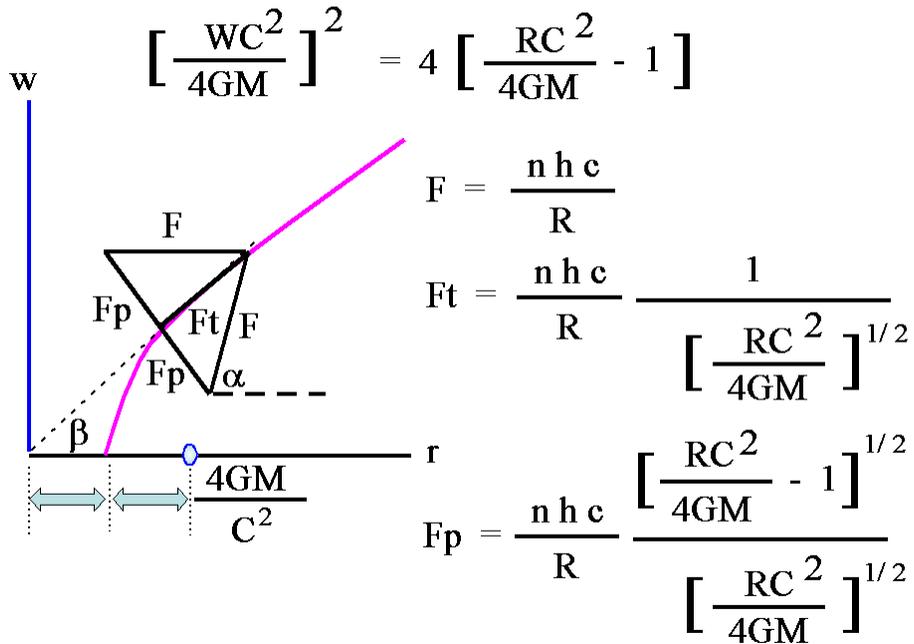
$$d(ct)^2 = dR^2 + dW^2 = \frac{dR^2}{\left[1 - \frac{4GM}{RC^2} \right]}$$

4) Solving the integral

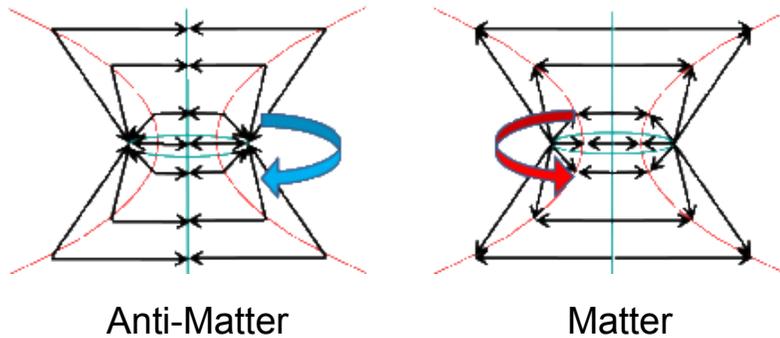
$$\left[\frac{WC^2}{4GM} \right]^2 = 4 \left[\frac{RC^2}{4GM} - 1 \right]$$



$$\tan(\alpha) = \tan(2\beta) = \frac{2 \tan(\beta)}{1 - \tan^2(\beta)}$$



Matter - Antimatter

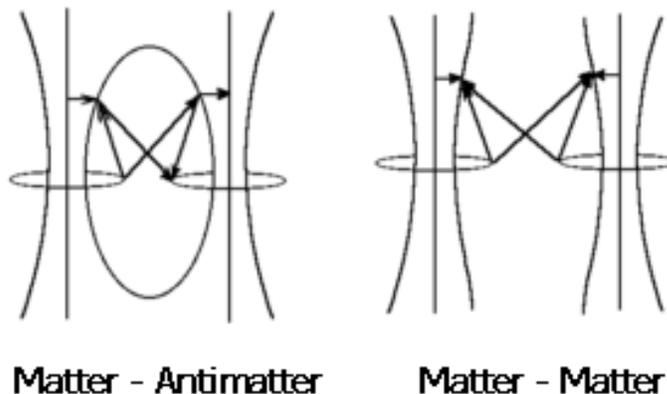


Whether the particle generated is matter or antimatter depending upon the types of subspaces that are used. They both have an electrical force but the opposite charge resulting from the force from the outer ring. This force reacting to other particles is electrostatic since using the fine structure constant;

$$F = (nhc)/2\pi r^2 = (nq^2)/2\pi r^2$$

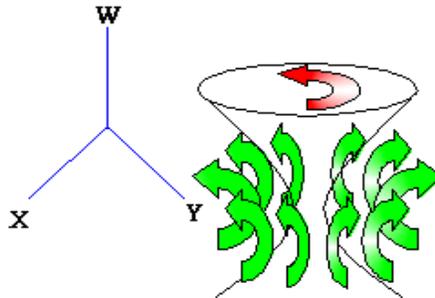
Two like particles, matter-matter or antimatter-antimatter will repel each other due to the combination of forces from their inner foci. Likewise, a matter / anti-matter combination will attract each other up to the $8GM/C^2$ limit. This $8GM/C^2$ limit is related to the Nuclear Strong force that counteracts the force of two charged particles across a short distance. It appears that two like particles can stay within this limit without experiencing a repulsive force. Note that this is forcing a charge restriction positive to matter and negative to antimatter using the model of the electron as the simplest particle.

Electronic Attraction Repulsion

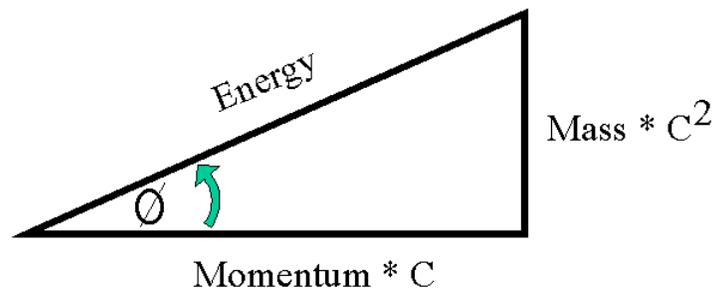


Magnetic Effects

To see the magnetic field we have to see how the spinning subspaces interact. An object directrix is only along the W axis when the object is at rest to your observation.

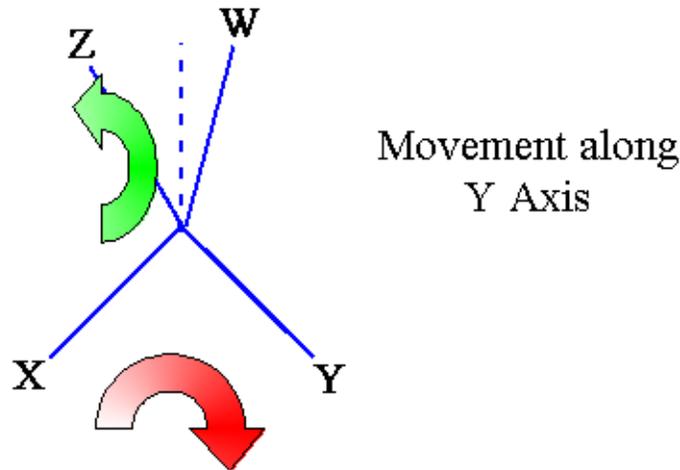


The relativistic effects of an object in motion actually show it leaning in the direction of travel where the cosine of the angle of the leaning = v/c . This is similar to Einstein's relationship between Energy, Momentum, and Mass in the diagram below (cosine $\phi = v/c$).



The spinning of the ring subspace has an electrical and a magnetic component at each side, perpendicular to the travel vector. It is spinning up and down (W-R plane) which is the electrical field and it is spinning in the direction of travel which is the magnetic field. The amount of magnetic field is related to the leaning angle which is the velocity.

In like manner an electron is not affected by a magnetic field unless the electron is moving through the field. It cannot see the force unless it is moving and there is a slope to its outer subspace spin. The slope allows the magnetic field to affect the spin of that particle's electrical subspace. And since it is affecting the side of the particle the change in the balance of forces in the area of compression will cause a movement perpendicular to the magnetic field and the direction the particle is traveling.

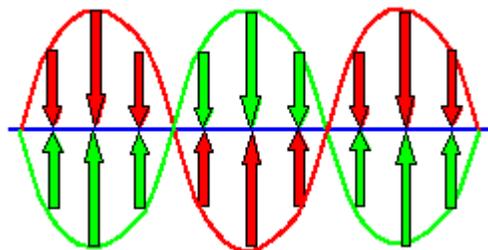


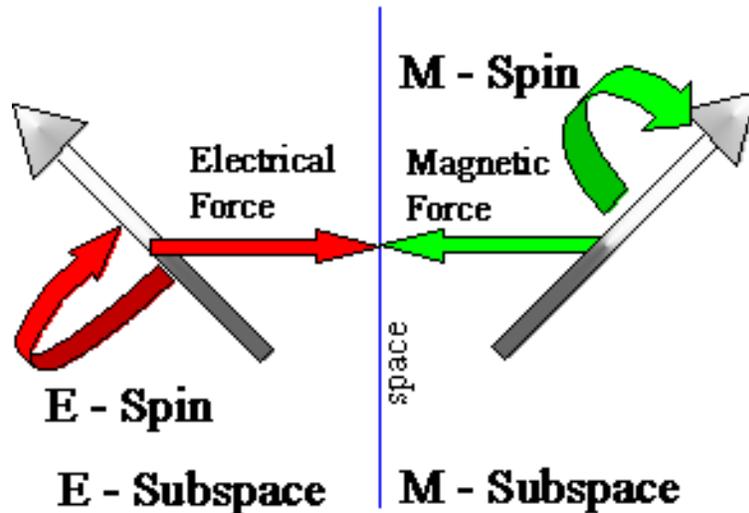
Magnetic Field (Spinning in X-Y) caused by the angle of the W axis toward the Y axis seeing the Electrical Field spin X-W.

The Essence of Light:

The equations of Maxwell show a waveform for light that only travels one speed, c , in the vacuum of space. It is sinusoidal in nature with the electrical field E and the magnetic field H orthogonal to each other and in phase with each other.

Now I have a slightly different definition. Two subspaces, one electric and one magnetic, are alongside each other but on a slightly different path perpendicular to each other such that the spin of one's subspace is the path for the other's subspace. Between the two they make a double helix exactly like our DNA molecules. Because it is across the W axis as well as the space axis we only see part of the waveform. This magnetic subspace is 90 degrees out of phase with Maxwell's magnetic field.





The key is that these two theories are compatible; the direction of the Magnetic Field is just a convention. Faraday used the alignment of iron filings as the direction of the Magnetic Field. However an updated Maxwell's equations could provide a new dynamic view of subspace interactions.

Composite Particle Models

Elementary particles can only exist in discrete sizes. This is because the gravity field is directly related to the size of the mass that produces it but the energy of the mass is inversely related to the size of the gravity. A larger gravity curvature would result in a smaller mass at the neck of the hourglass; the light around the neck being reduced in frequency. A larger subspace would have a greater centripetal force but the energy around it would be less. And since it would start to attract more light it would not remain in balance and would have to reduce its size giving off energy. Remember, the spin of the subspaces reacting off of each other gave the shape of the gravity field.

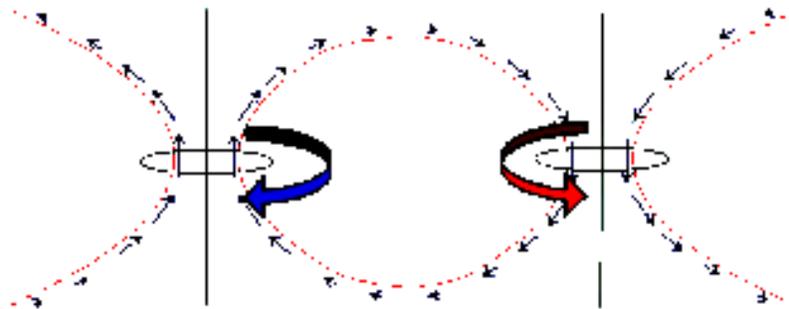
These balanced sizes approximately equal $n^{1/2} \times 10^{-8}$ KG, where n equals the number of wavelengths of light around the hourglass, matching the number of wavelengths of the internal virtual light. Note that the electron is only 9×10^{-31} KG and the proton is 1.7×10^{-27} KG. Thus, our known particles must be a composition of both matter and antimatter elementary particles.

It is possible to develop particle models where composite particles consist

of both matter and anti-matter particles. In these models the summation of masses must add up to zero, since the elementary particles are much heavier than any known particles. The relativistic movement of the masses provides the delta changes that give the particles their masses. Likewise, the forces are added together with the residual forces accounting for the charge of the particles. Since the mass is related to $n^{1/2}$ and the electrical force is proportional to n , the generation of the model is quite simple. The list of particles could go on forever, but a simple list is presented with a possible matching of known particles.

Neutrinos:

Looking at the simplest particle construction shows a particle of no mass. It is made out of one anti-matter elementary particle and one matter elementary particle. This neutrinos particle also has no charge. It is hard to determine its stability, but it must move at a speed close to the speed of light, since the two masses cancel each other out. There is no relativistic mass addition to give it any weight.

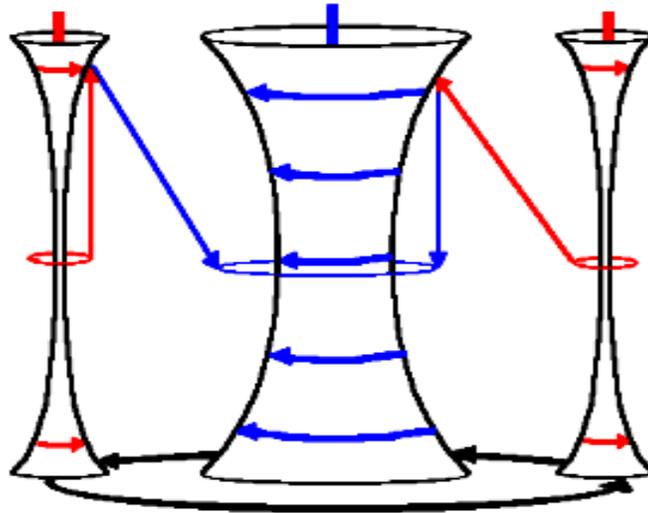


This raises an interesting question, since matter and anti-matter explode on contact producing light, why doesn't the neutrino explode? There is a lot of energy in this particle. This energy exists at the $W = 0$ part of the neutrino but it does not exist in the blended particle state, those in the positive and negative W axis directions. As far as the universe is concerned, the particles sit in an energy well.

Electron:

The next model shows two matter particles moving around an anti-matter particle. Each of the outer particles has a mass of 1, and the innermost particle has a mass of -2. The two outer particles rotate around the inner particle billions of times a second at a distance comparable to the Compton wavelength. This produces the relativistic mass change that equals the weight of the electron. Of course, this raises the question about the

resultant leftover forces. The inner particle has a spin of 4, and the outermost particles have a spin of 1 each. The leftover spin of two is the charge of the electron.



Is radiation generated from the spinning particles? If we could look at the light, we could see that the gravity actually bends the light so that the effects of the spinning particles are localized and cannot be detected outside of the composite particle. The effect of the blended particle is just the charge and the gravity.

This model does show various characteristics of an electron. It has a charge and a magnetic moment. The charge is distributed in a ring around the elementary particles that make up the electron. Its energy is distributed across space except where it connects with a positively charged particle like a proton. At that point the overall energies of the particles are joined together. This is part of the bonding process that holds atoms together.

Mesons:

The mesons models are interesting because they seem to fit some of the observations to date. They are heavier than the electron model and have more degrees of freedom. There are an infinite number of forms for the Meson model. They are centered on the -3 particle and have various states each with a different charge. There is a zero charge state consisting of a -3 core with three +2 particles and three -1 particles. There is a negative 2 spin (single charge) consisting of a -3 core with two +2 particles and a single -1 particle. There is a positive 2 spin (single charge) consisting of a -3 core with four +2 particles and five -1 particles. This gives a clue to their instability. Stability may have to do with refresh, the

sinking and sourcing of light from the universe.

When one divide the number of internal forces to the number of mass particles, the mesons have a higher number than the electron. To put it simply there are more things spinning in a mesons than an electron.

Baryons:

Anyone's guess although mesons circling anti-matter electrons is an option. The next step will involve calculating the weight of these particle models. Hopefully someone will champion these calculations.

One last thought about particles. These are particles of matter that may have energy and gravity but may have an entirely different light shell to interact with light. I feel that there are other models for particles perhaps consisting of multiple subspaces that would react entirely different than the particles listed above. They may occupy more than three dimensional of space.