Evidence for the Existence of Superluminal Waves in the Creation of Matter & Energy
A Physical, as well as Mathematical Explanation

Part III: The Consequences of an Ultrawave Theory of Matter

The very existence of a 2D string raises the question, can a string have an inherent mass? Even if it were only a perceived mass based on string/brane interactions would it make any difference?

Making the simple statement ‘strings have a mass per unit length’ allows the discovery that the shape of a torus can provide insight into how increasingly heavier particles can have progressively smaller sizes. Cross-sections of the tori that control magnetic moments and spin shrink, while the diameters controlling electric charge grow. Anything with a spin-1/2 interaction shows the same relationship of ideal magnetic moment (magneton value), torus surface area, and spin.

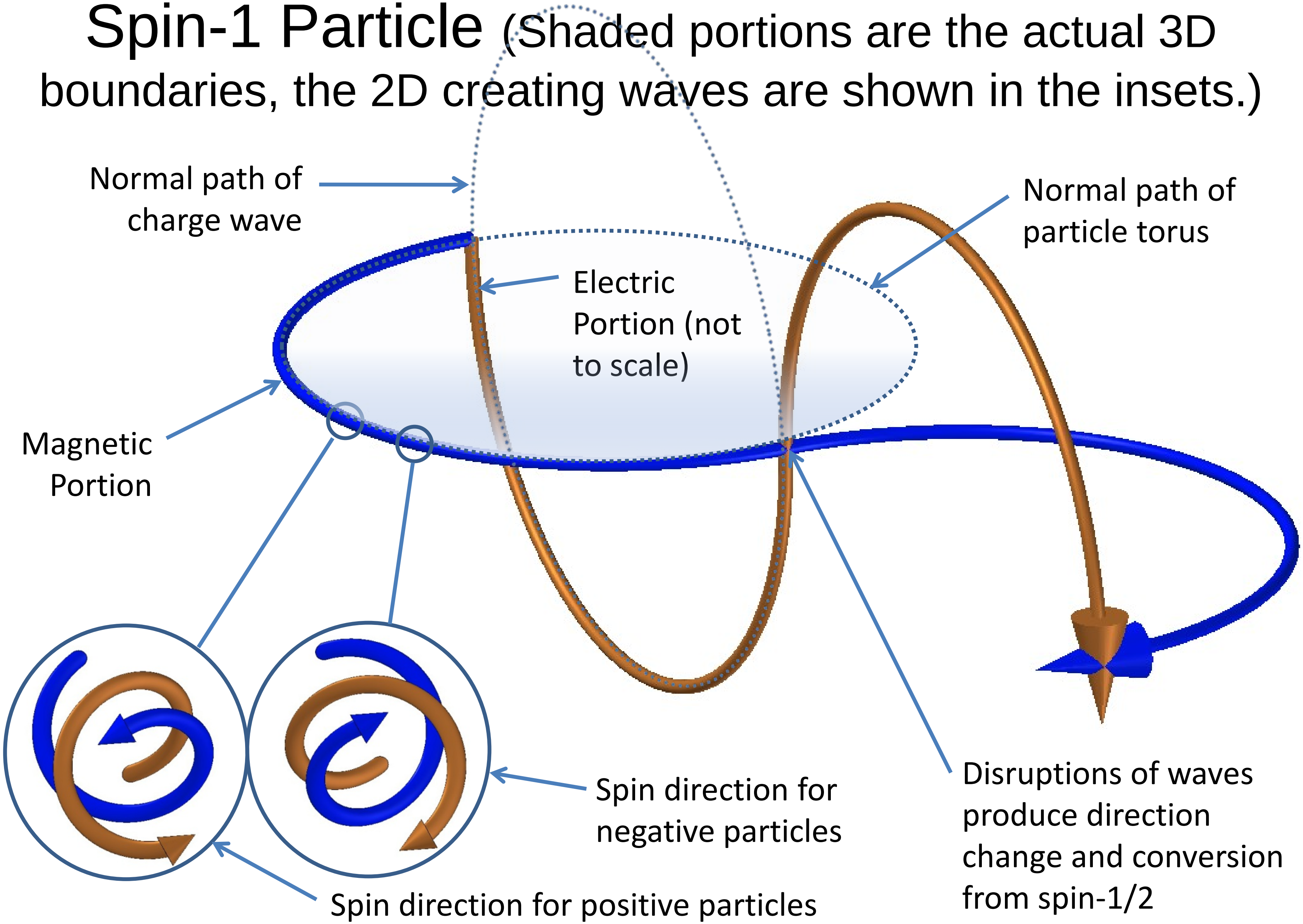
Other spin types of particles can be structured by reconfiguring the strings and branes of spin-1/2 matter. Because they are all created from the same entities, all particles including neutrinos have the same inherent mass carrying waves inside them.

Visualizing Non-Matter Particles

Even though the mathematics seem very clear about how spin-1/2 particles are created, their true physical nature is hard to visualize. How do the branes and waves interact with each other? What would they look like if they were visible?

The following computer generated models are examples of what the string and brane interactions might look like for creating spin-1 particles and neutrinos. The models are only conceptualizations, and may not represent the true reality of how the two types of objects, strings and branes, come together to create matter and energy. Their structures; however, are in concert with how the spin-1/2 particles of Part I are built.

Spin-1 Particle (Shaded portions are the actual 3D boundaries, the 2D creating waves are shown in the insets.)

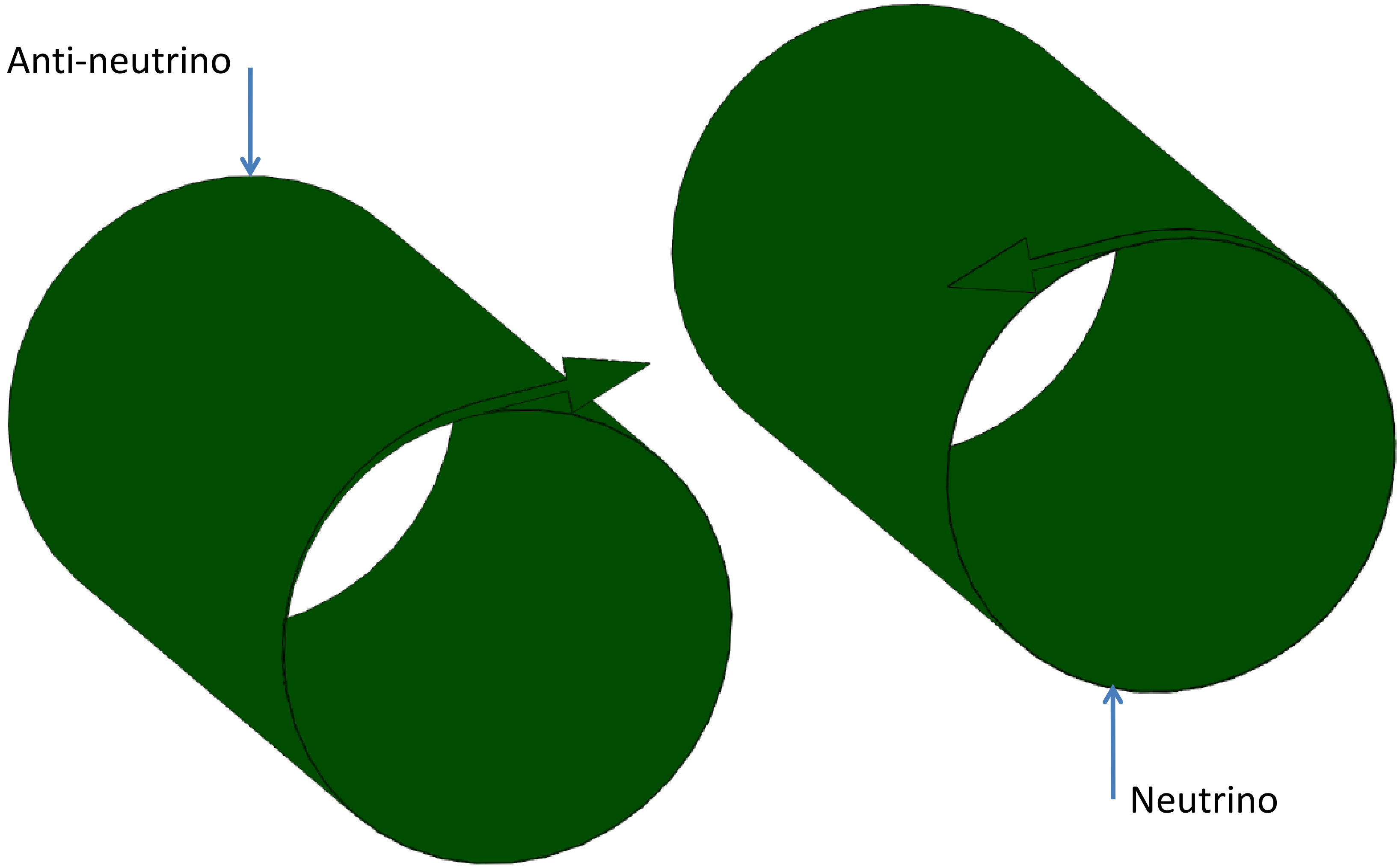


Photon Considerations

It is obvious from the diagram that a photon is nothing more than a converted spin-1/2 particle. Being spin-1 means that the photon’s travel must be controlled by a brane wave traveling linearly at velocity *c*. The electric and magnetic portions clearly oscillate at 90° to each other. What isn’t clear from the diagram is why the spin is no longer one-half.

In normal particle interactions the part containing the spin is the only part that adds momentum. It is not that the charge cannot do this, it is that the charge becomes separated from the spin and takes part in a different way. In the spin-1 scenario, the charge is no longer easily separated from the spin portion and ‘normally’ adds its momentum to that of the spin portion.

Neutrino (Shaded portions are the actual 3D boundaries; 2D creating entities rotate in arrow direction, with travel direction outward, axially along tube length.)



A neutrino is essentially the spin portion of a particle. It has been stripped of charge and has a fixed length based on the amount of mass present that produces it. We know that the mass of an electron neutrino in neutron decay is equivalent to the mass of the neutron minus the mass of a proton and an electron. All neutrinos produced in this way should have the exact same energy, as they have the same mass carrying wave present.

The mass energy of a neutrino should never change, so conversion from one type into another is not possible unless something about the spin changes. A larger spin radius would produce a higher perceived energy, but there is no indication that spins other than what the mass implies exists; meaning that a neutrino’s spin radius is reliant on the mass of the originating particle torus.

There are only two other known types of neutrinos besides the electron neutrino, the muon and tau. They are produced in decays of the muon and tau particles respectively. Their masses are determined by the decay particles present.

Neutrons decay into protons, electrons, and electron anti-neutrinos. An electron neutrino or anti-neutrino then has mass: 1.394647E-30 kg

Ninety nine percent of muons decay into electrons, electron anti-neutrinos, and muon neutrinos. A muon neutrino then has mass: 1.860476E-28 kg

Close to two thirds of Tauons decay into hadrons with the remainder split almost equally between electron and muon decay modes. This implies that there is more than one mass value for tau neutrinos.

The other one percent of muon decays would indicate that it too has a second mass possibility. Because the neutrino configuration is a tube, it can have varying lengths, which explains how there can be more than one muon or tau neutrino. It also explains why muon neutrinos are harder to detect than electron neutrinos, and tau neutrinos are even harder to detect than muon neutrinos. The tube cross section of the particle torus shrinks as the particle mass increases meaning that whatever is created from it would tend to have a smaller cross section, as well.

Particle detectors are not built with the correct assumptions in place. The possibility that orientation of the detector material (torus turned planer or anti-planer) can affect detection counts is not a current consideration.

If mass is inherent, how do we reconcile the current decay modes if neutrinos do not have varying amounts of material?

Decay modes are interpretations of data that are very subjective to say the least. These interpretations are also biased toward expectations that researchers are expecting to find. If the particle detectors only show hadrons as a ‘first’ decay mode about two thirds of the time, does that necessarily mean that it doesn’t happen after a muon and electron decay has already taken place?

Since ultrawaves have an inherent mass and that mass must be accounted for in particle decays then it seems reasonable that enough particles are produced to add up to the total. The idea that some of the momentum energy is used in the particle creation is not correct. Momentum is a separate item completely. It still needs to be conserved in particle collisions, but it does not have anything to do with particle creation.

Since energy and mass are truly the same, it takes 207 smashed electrons to make one muon and 3478 to make one tauon. No wonder it takes such a large electron beam to produce heavier particles, and why there are so few produced. Protons have an 1837 times mass advantage with an opposite internal spin, which is why they tend to produce such different particles.

As the Standard Model has progressed, it has unwittingly incorporated much bias and skewed expectations. Only if the new ideas presented by ultrawave theory are taken into account will that bias disappear. There are probably many simple changes to current experiments that will produce significantly different results, or at least different interpretations of the data once expectations change.

Where does anti-matter fit into ultrawave theory?

Simply put, anti-matter is already present all around us. Positive particles are anti-particles to all negative particles; it is all a matter of internal spin direction. We see positive electrons and negative protons due to the fact that the internal spin of the particle torus can be left-handed or right-handed. The only reason they are only produced in particle accelerators is because the universe must have had an initial spin bias, which caused certain masses to spin in preferred directions.

The fact that we only see one left-hand spinning neutrino and one right-hand spinning neutrino should be obvious. They are created from a torus and the torus only spins right or left-handed. There is simply no reason to have other version of neutrinos.

Since Ultrawave Theory replaces the Standard Model and $E=mc^2$, does it contradict Einstein’s relativity theories?

Not in the slightest. Ultrawaves can help in explaining how relativity works. Gravity is created by the natural motion of branes toward points in space as they are assisting in the creation of matter. When the secondary motion (acceleration) of a material object occurs it is against these branes that are creating spacetime. Acceleration and gravity appear to be equivalent because each represents the motion of, or the motion against, the branes that are creating the entire spacetime framework.

All of these aspects of matter creation combine to provide a physical explanation for the odd effects of applying accelerations to material objects that already have internal motion. Supplying additional motion can then only be defined by relativity. Changing secondary brane velocities against branes with fixed velocity will make temporal shifts an unavoidable outcome.

Relativity and its Connection to the Quantum

Based on what has been learned so far, several postulates can be made concerning the creation of matter and energy and its relation to gravity. First, all electric and magnetic fields are manifestations of the existence of ultrawaves. Second, space is a manifestation of the existence of branes. Third, gravity is merely a byproduct of the creation of matter; therefore, gravity only exists where matter exists.

Another implication is that matter and energy, in whatever forms they might take, have some relationship to the branes that are creating space. All matter and energy can therefore be shown as having the ability to be spatially connected. This connection through ultrawave “sharing” across branes within the spacetime framework is what physicists refer to as “entanglement”.

A further implication is that matter and gravity have a relationship that can be quantified. Since matter converts to energy while still retaining mass, gravity should affect energy in the same manner as any other particle.

Newton's G constant can be derived numerically by using the physical aspects of particles. The equation for G is defined in ultrawave theory as either:

$G=1/2m_x \cdot c \cdot r_x/(2 \cdot (4pi^2 \cdot r_x \cdot R_x))$ with units of kg/s, or

$G=1/2m_x \cdot c \cdot r_x/(8pi \cdot m_x \cdot C^* \cdot r_x)=c/(16piC^*)$ with no units

Both cannot be correct, so which units make more sense. The gravitational value g would have units of $kg^3/(m^2 \cdot s)$ for the first equation, and kg^2/m^2 for the second equation. The first units seem odd and have no precedent, but the second units are a pressure, which is exactly how gravity can be viewed by a stationary person or object.

A further implication of gravity created by the interaction of branes with matter is that the strings that are creating matter are also interacting in a secondary manner with the branes. This brings up the possibility that strings, which are traveling at about 9 light years per second, can be influenced by and have influence over matter at very large distances over very short time spans. Not only does this give a reason why gravity is assumed as instantaneous when using it in equations, it also can explain other items that now have no clear explanation, such as dark matter and dark energy.

One last note about gravity is that due to its being generated by the creation of matter, it may be possible that it is not ubiquitous. Gravity may have a limited reach, which supports the slow cold death view of the evolution of the Universe.