

Matter is Light -- for the Layman

Hi folks, we may get to watch that which may be an outstanding fireworks show across the world of quantum physics, astronomy, cosmology, biology and even philosophy caused by the Turbx papers.

To put it in context, Albert Einstein's reply to questions about complex subatomic particles is often quoted.

“You know, it would be sufficient to really understand the electron.”

The Turbx papers provides a detailed conceptual model of the electron and the proton with supporting mathematics that are revolutionary in both concept and mathematics. These concepts, models and mathematics provide the means “to really understand the electron.”

Why fireworks?

**The Truth will triumph when honestly examined,
but it will be an epic fireworks display!**

The TurbX papers provide a whole new understanding of how the universe works, and a whole new basis of theory of quantum physics. These papers change the basic understanding about everything -- about physics, particle physics, astronomy and a host of other topics. Such sweeping changes must be argued out from every possible viewpoint.

What kind fireworks?

There are at least three possibilities.

1. Fizzle – it turns out that the Turbx papers are bad concepts supported by bad mathematics – the papers could and should be quietly ignored.
2. Continuing Minor Show – the Turbx papers are good concepts but substantial adjustment is required and must be developed in a worldwide extended effort that may take decades.
3. Major World Wide Exciting Show (my vote) – The Turbx concepts, models and mathematics are examined worldwide and found to be fundamentally accurate.

The fuse is already lit

The Turbx papers have been published worldwide.

Alright, the Turbx papers are important, what is revolutionary about them?

The fundamental building block of particle physics are De Broglie waves, a nebulous thing called probability density function (i.e. the probability of finding the electron at this exact point), with nebulous properties and very peculiar wave properties. For example, we have all seen a wave hit a wall and bounce back (reverse direction). According to the mathematics of the De Broglie waves they can be alone in the middle of the ocean and continually bounce back and forth in a manner that keeps them in a local area for no reason at all – strange concept isn't it.

Concept: All matter is built of photons!

The fundamental building block in the Turbx papers is the photon, the light you see by, radio waves, x-rays, all well known physical phenomena with accurately known mathematics and many simulation programs to allow study of detailed interactions. While concepts of light (photons) has been floating around quantum physics for many years, there have been no conceptual models or acceptable mathematics showing how to apply the concepts. The Turbx papers develop the conceptual models, and supporting mathematics that allow the powerful mathematics and simulation capabilities already in existence to be applied accurately to particle physics.

Then why do the photons turn around in the middle of the ocean?

Concept: Matter is made of photons trapped in energy wells.

You are acquainted with several examples of energy wells, a whirlpool, a gravitational energy well, and rolling a coin around, around and down the cone at the amusement park.

The whirlpool energy well provides an excellent visual example of an energy well. Most places on the earth, a bathtub in the process of draining rapidly will generate a whirlpool energy well (depression) in the surface of the water over the drain. If you could place a marble on the surface of the water, it would roll down hill to the center of the energy well. If tub contains enough water the energy well may develop into a tornado form reaching clear down into the drain.

Gravitation is a well-known energy well. If you are on the surface of the earth much energy must be added to get you as high as the space station. If you want to leave the earth's energy well, e.g. go to Mars, you must add even more energy. The gravitational energy well is what holds you down.

The coin roll at the amusement park provides an especially useful example. The coin is introduced with a high lateral (sideways) velocity and rolls at a large diameter near the top of the cone, just like an electron circling far from the nucleus of an atom. Unlike the electron, the coin roll loses frictional energy every cycle around the cone, thus as the coin slows down each circle is smaller and lower than the previous circle, until the coin drops through the center of the cone.

In a similar manner, the fabric universe, once called either aether or ether, may be visualized as a tightly stretched soft mattress, anything you put upon it will make a dent or energy well. For example, if you put a one kilogram cannon ball on it, any marble placed anywhere on the mattress would accelerate continuously toward the cannon ball until it struck the cannon ball. If you used a ten kilogram cannon ball the energy well would be much deeper acceleration would be much faster. If you gave the marble lateral velocity and friction were present it would act exactly like the coin roll at the amusement park. If there were no friction, it would circle the cannon ball at a fixed distance forever just like the electron in a hydrogen atom.

Concept: Anything having energy

makes an energy well in the fabric of the universe.

Concept: The velocity of a photon acts just like the coin in the amusement park coin roll, it will circle at high velocity far from the bottom of an energy well. To get close, it must slow down by losing energy.

Oops, it sounds like you just said the speed of light changes.

Yes!

Concept: The speed of light is slower and slower as it gets lower into any energy well.

The 1887 Michelson Morley experiment and many more recent papers have verified that wherever you are and whatever your velocity, your measurement of the speed of light will be invariant (reference http://en.wikipedia.org/wiki/Michelson%E2%80%93Morley_experiment). Let's call c_0 the measurement of the speed of light by a test observer at a given location, velocity and energy well depth somewhere in space. Turbx is in full agreement that given that set of test conditions c_0 will be a fixed number.

But the theory of relativity declares that the test observer is subject to the Lorentz contraction – in short, the test observer's yard stick got short. If the difference between the stationary observer and the test observer is only a difference in velocity, the Lorentz contraction will accurately translate from one measurement by one observer to the other, but if the difference between the observers is one of depth in an energy well – the actual velocity measured by the stationary observer not in an energy well will be different from the test observer measurement in an energy well.

The earth's gravity is an energy well. The Lorentz contraction calculates the effect of gravity on the speed of light, the length of physical objects and how fast time changes. The precision clocks the space program has put all over the solar system have provided abundant data about the time dilation. That data is well presented in [En.wikipedia.org/wiki/Time_dilation](http://en.wikipedia.org/wiki/Time_dilation):

Clocks on the [Space Shuttle](#) run slightly slower than reference clocks on Earth, while clocks on [GPS](#) and [Galileo](#) satellites run slightly faster.^[1] Such time dilation has been repeatedly demonstrated (see [experimental confirmation](#) below), for instance by small disparities in [atomic clocks](#) on Earth and in space, even though both clocks work perfectly (it is not a mechanical malfunction). The laws of nature are such that time itself (i.e. [spacetime](#)) will bend due to differences in either [gravity](#) or [velocity](#) – each of which affects time in different ways.

Ok, I understand the revolutionary concepts.**What are the revolutionary mathematics?**

The Turbx conceptual model is built of six photons grouped into three pairs. The magnetic properties of the photons affect all the pairs, and the electrostatic properties of a single pair affects only itself. The standard equations, not having the insight of the six photon conceptual model, cannot begin to correctly describe the mathematics involved.

The calculation for the velocity of the photons arises from the single pair property in the presence of three pair energy well and thus is the cube root of the standard equation.

The calculation for the energy of the photon instead of being proportional to the velocity squared like the standard equations is proportional to the fourth power of the velocity, because of the magnetic properties affecting all pairs.

These shared magnetic properties are the binding force that holds together both the electron and proton.

Why should we believe the Turbx papers?

You shouldn't yet!

The conceptual models accurately fit the accepted properties of the electron and the proton and the quark. The papers present calculations that fit accepted measurement to six decimal places for the electron, and four decimal places for the proton.

These are strong arguments for a working hypothesis that they are true. This working hypothesis allows everybody to examine the concepts and the mathematics and propose a multitude of experiments that will support or refute the hypothesis or require adjustment of the theory. The scientific jury needs to gather data based on this hypothesis in order to determine the truth.

A reasonable expectation is that the Turbx papers will set off a tidal wave of new accomplishments in many fields of scientific effort.