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I thought I would describe an interesting experiment that seems to shed some light on matter and gravity.

Suppose our experiment consisted of an inductor L and a capacitor C both lossless ringing at their natural resonant frequency.

The energy swaps back and forth between the L and C as it alternates back and forth. You can think of the stored energy in the L and C as equivalent to a mass which the mass stays constant. Now we know that slowly dropping the LC circuit into a lower gravity potential will drop the frequency. In our circuit we can artificially drop the frequency by increasing the C or increasing the L or increasing both.

Suppose our lossless C was a vacuum space capacitor and we are holding a dielectric we are going to slip into the open space of the plates. The frequency drops when we do so. Furthermore the attraction of the electric field pulls our dielectric into the space which imparts energy into our arm holding the dielectric. When the dielectric is slipped into the C the frequency drops and so does the energy in the LC circuit.

Modeling the LC circuit in a small time step program shows an energy drop and a frequency drop just as we would expect. All is well. However when we slowly change the L in the model the opposite happens. As we increase the L the energy in the LC circuit rises. This would indicate that if we built a LC circuit with an open wire coil and we had a lossless ferrite rod we would have to push the rod into the coil and we would be putting energy into the circuit as the frequency drops.

So you see the L increase and the C increase have opposite energy consequences. In fact the model shows that the LC circuit does not change its energy of both the L and the C are slowly increased in the same proportions. But if the LC circuit did not change energy when dropped into a gravity field there would be no force of attraction.

What I want to point out here is that it seems the change in C is consistent with the change in frequency and change in energy of the LC circuit consistent with

what we see in a gravity field moving from one gravity potential to another. The change in L is backwards.

So let's think for a moment about that change in C . The energy in C is just from an electric field and the permittivity. We know that the mass of an atom is far too small to have a gravity field of any consequence. However the electric fields are enormous. What if and just consider what if the strong electric field is warping the permittivity so that the energy in the electric field is finite at $r=0$ for an electronic charge? A permittivity gradient would create a change in the speed of light as well as the metrics in GR. It would cause bending of light around the sun.

There is another very interesting property about using permittivity to describe what is going on.

You know how we keep describing the gravity potential as a negative well. In the case of the permittivity we see a rise as we approach $r=0$ so that right at $r=0$ the permittivity is infinite. Space is shorted out at $r=0$, time flow is 0, and the speed of light is 0. Think of matter as a collection of singular points floating around in space. The singular point falls off as $1/r$ from the singular point but the rate of falling off is not the same for every singular point. The rate of falloff is somehow proportional to the energy stored in the singular point. So each singular point has a permittivity field falling off at m/r rate where m is the mass of the particle. This makes gravity appear to be caused by mass when in fact it's only proportional to mass. The real cause of the gravity field is the strong electric field, not mass.

So I'm going to keep refining this model. I hope to bring Planck's energy frequency relationship into the model at some point so we can dispense with the G term in Newton's equation. This stuff is not inconsistent with GR. It's just an expanded version of the GR effects. I'm trying to explain the source of both matter and gravity and it seems the electric field is the connecting media.

Gene Preston