Hi Tim,

> Diodes in oil -- are you talking about a Cockroft-Walton voltage multiplier?

Cockroft-Walton's won't produce 500,000V. The problem is that pure DC is not only expensive(e.g,Marx generators) but the apparatus is too heavy for a prototype (you want to be able to lift the power source). Also it would be very nice to rely on a RCL tank circuit that would require very little power input but provide high AC voltage. The full wave rectifiers (using those oil immersed diodes) would be needed also to provide that rippled DC. The next question is how to give the charge that high angular velocity and high dtheta/dt. Piezo electrics don't work well, have a problem with hysterisis, superconductors can't be made big enough but are ideal since the electrons in the SC vortices have very high speeds(~100,000m/sec), give high angular velocity and high charge.ordinary conductors have the problem of low electron drift velocity, typically 1mm/sec, useless.

Ironically these kinds of problems don't exist in certain natural settings. For example a high velocity charged wind rotator that is also oscillating in the theta direction could exhibit a antigravity effect if the voltage is right. In both tornado and thunderhead storm systems -- start from the same early structures: the hammer-head formation which are around 300kv. Tornado clouds have been termed as a low voltage thunderheads. When a certain voltage is reached, the cloud undergoes a dynamic change in the basic structure. Interestingly, tornados haven't been seen over a maximum of 600Kv. In contrast, thunderheads start at over 1Mv and never develop the rotor motion... There seems to be something happening at the lower voltages which drastically alters the course of the cloud's nature..."

At 100kV insulating capability per meter go a few meters deeper into the tornado (instead of at the 300kV surface) and we see 500kV instead of 300kV. Thus these rotating and oscillating objects (tornados) have a optimum voltage of formation of around 500kV.

Note that "*when a certain voltage is reached*" comment with that voltage being around 500kV. Also "*thunderheads over 600kV never develop the rotator motion*" comment. Also note the comment that "*There seems to be something happening at the lower voltages which drastically alters the course of the clouds nature*". It appears the cloud becomes very dynamic around 500kV and is not so way above or way below. But I would have expected that given that singularity at 512kV, rotation w, oscillation dtheta/dt, etc..!!!! (in that regard recall:effect=Vw(dq/dt)[sin²q][1/(1-V/512kV)])

Perhaps thunderhead meteorology is the best experiment. Also toronados are known to be accompanied by that oscillation(that seismic vibration, here a dtheta/dt component of this equation)) and this has even been used as a tornado detector, someone has patented this idea.

Anyway the dynamics of how tornados work is well understood(warm air is buoyant), but apparently there are still mysteries about how they form, with the implication here that their "formation" is electrical in nature.

>Good, solid method for producing high-voltages: I've had REALLY good luck with the diodes -- they rarely burn out, if > you have a good engineer pick them well within tolerances. However, the control electronics can burn sometimes .

Need to match impedances to lower electrical current requirements to prevent this burn out. In that regard I had figured out this mg change with voltage back in 1997 (have known about these mg vs voltage effects for about 7 years now from this theoretical work, way before Pod) and even submitted it to NASA in a 1998 BBP proposal. NASA wouldn't consider anything but mainstream ideas from what I was told.

Anyway the point is that I could do all this work you are talking about (e.g., with the diodes) but I cannot obtain the resources.

Sincerely,

David

Subject: hi

Hi Tim,

> This is a great concept --

That is very kind of you to say. All this idea really is is to note a algebraic oversight! That doesn't sound sexy but it sure works. The harmonic gauge is not a gauge after all, those harmonic oscillations are real, the dirac equation zitterbewegung oscillations. They must be incorporated into GR by doing a Fourier expansion of the metric coefficients in terms of exp(ikr) and noting the k->kslash since the dirac equation is involved. Combining gravity and QM is as simple as that. Thus by noting that GR algebraic oversight you automatically incorporate QM into GR, things fall together, there is a ring of truth to it.

> I've felt for a while that physics went off the rails in the 1970's --

The QED higher order diagrams were the real road block here because we were not supposed to get rid of them..

:> ::: Have you submitted these papers to STAIF? I can't recall if you said you had in a previous email. That STAIF propulsion paper was submitted in 2003. Can't do it again.

> Also, a quick follow up note: based on this theory, are there any simple experiments that you can think of to > manipulate gravity? What is needed is high voltage DC with ripple on a superconductor in a magnetic field.. Note in impulse= integral Vw(dtheta/dt) sin^2theta/[1-V/512kV)] that if V=512kV the impulse is infinite!! But the conservation of energy restricts the energy output so that small energy flow means the apparatus will "float". More power means going into space. The input must be phased however so that the integral doesn't add to zero.

A revolutionary space transportation system could be based on this device.

Unfortunately DC is expensive. But AC doesn't hang at 512kV and so doesn't give much of an effect. Pod ramped through 512kV. Until this hanging at 512kV process is perfected (with that phased rotation and oscillation) there can be not huge antigravity propulsive effect. I have my own ideas on how to do this which I presented to STAIF 2003. It uses rectified AC which involves big diodes in oil. The two circuits together produce a fluxtuation on either side of 512kV that can be used for propulsion. The ideas is to make a tank circuit that will not require too much power.

Sincerely, David

PS. That 500kV circuit opening produced an unusually large spark according to my electrical utility friends. Stability is to be expected (as in pods apparatus) for rotating and oscillating electron clouds of this voltage (see STAIF paper). It was rms 500kV but for those times when the voltage was close to 500kV the circuit would produce this stability.

PS. Recall that in Einstein's equations that we substituted 8piGrho -> 8pie^2/mc^2. But the Einstein equations equation also work if we go backwards so that e^2/mc^2 is replaced by 8piGrho in impulse=Vw(dtheta/dt)sin^2theta/[1-V/512kV)]. Thus this works for a rotating and oscillating black hole, an accreting black hole! Thus our equation works for black holes that are growing fast. By golly that means that these kinds of black holes will send out beams as well from their poles! (just like Pod's pulser) But of course these beams have been noted in active black holes and not observed in nonaccreting black holes like the one in the center of the milky way galaxy. Thus we also have as simple explanation for why certain black holes emitt these beams out their poles. There is a cool physics paper sitting here.

-----Original Message----- **From:** Maker, David [mailto:David.Maker@tbe.com] **Sent:** Tuesday, August 17, 2004 4:03 AM **To:** 'Tim Ventura' **Subject:** WARNING(virus check bypassed): contextualize

Hi Tim, Sorry, I felt asleep and didn't call. It was a lot later here in Huntsville and I got up to go to work at 4:30AM.

>Complex stuff though

No it isn't. It is just a matter of noticing an oversight in the GR algebra. The harmonic gauge is not really a gauge because of the ubiquitous Dirac zitterbewegung oscillation. (that is all there is to it!). This gives a generally covariant Dirac equation with horizons that allow for unobservable smaller objects of the same type inside, hence the fractalness. All the rest of these results are a mere mathematical derivation from these equations.

Sincerely, David

Ungauged General Relativity,

David Maker

This paper is on a UNgauged general relativity. Ordinary general relativity has 6 independent equations (due to the Bianchi identities) and 10 unknowns, which is a algebraicly INcomplete system. The usual method to remedy this is to make general relativity into a gauge theory. For example the four harmonic gauge equations provide the needed additional equations making general relativity complete. But here we note that a Dirac particle already exists in a real physical harmonic coordinate system (the zitterbewegung oscillation) so that a gauged theory is not required and so general relativity is actually complete anyway. But augmenting the Einstein equations with the Dirac equation causes the Einstein equations to be the Maxwell equations (E&M) in the weak field approximation. So we should put an E&M source (an 8pie^2/mc^2=Zoo) on the right side of the Einstein equations. But the potential you get from the metric (coming out of these new Einstein equations) has a small non coulomb part that when put back into the Dirac equation allows you to calculate the lamb shift without the higher order Feynman diagrams, just solve the Dirac equation directly, one vertex. So you get rid of renormalization, infinity summations to get finite quantities. And the one vertex S matrix you get from this Dirac equation distance apart (with this e2 source, not the usual Gr source) the clocks slow down, you get stability, the proton. Allow small motion around this horizon you get hadron eigenvalues such as mass from the resulting Dirac equation. Lastly you do a radial coordinate transformation(of Zab) to the metric comoving with the cosmological expansion and get the old Zoo plus a new one, the gravitational source. Thus you have derived classical general relativity. So what is important about all this? To restate the above:

1) You can't use all those non harmonic esoteric gauges anymore that give things like wormholes or whatever (black holes are definitely allowed, no problem with gauges here). They give a wrong general relativity since the harmonic coordinate system is all that is allowed. But about half of the papers in general relativity are written in these other gauges. So about half of the papers written in general relativity are fundamentally flawed.

2) You don't need all that renormalization, infinity summation, addition of fudge factor cancellation terms to the QED lagrangian anymore. Just solve the Dirac equation directly using those new potentials.

3) You don't need string theory to combine E&M and gravity anymore. Here everything is done in 4 dimensions.

3) To derive hadrons you then don't need fractional charges, flavors, SU(N) gauges, color, Yang Mills fields,...

4) In short what is the importance of this essay? By merely showing that General Relativity is a complete theory anyway you get rid of all the Rube Goldberg gobbleygook that is now plaguing physics!

GR is a complete theory anyway with no additional assumptions.

There are additional implications of dropping a scale requirement on the source (scale invariance or fractalness), thereby REDUCING the number of assumptions in GR. By dropping that implicit scale requirement there is one less assumption. Inside horizons there is no reason not to drop this assumption.with electron zitterbewegung being selfsimilar to universal expansion outside the horizon being the fractal selfsimilarity most compatible with observation. I have a paper published on this subject in the context of an ungauged GR: Chaos, Solitons & Fractals Vol. 10, No.1, pp.31-42, 1999. Note equation 6.2, rµsinhwt (hyperbolic sine) universe expansion (acceleration) inside the horizon in that paper. This paper was accepted in April 98. Also published this result in 1995 Phillips lab document (equation 30) which is prediscovery for the sinhwt expansion. I got a "fascinating idea" comment back in a letter from Archibald Wheeler on that selfsimilarity idea in 1981.

Note the solution here is essentially to make the algebra correct (note algebraic completeness). It's a grade school students algebra problem!! Simplicity itself. Even my 8 year old daughter understands the need to have the same number of equations as unknowns. No need to get lost in topology, 11 dimensions, gauges, group representations, etc..