

MESS 0016

Newtonian Mechanics, Kinetics, and Sound in an Electrodynamic Model; or creating a MOND2 on the basis of the Force for Plasma-Electromagnetic Dynamics (PEMD)

Sf. R. Careaga, BSEE, MSTOM

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ABSTRACT

In MESS0014¹, the author calculated the first attempt at a proposed k-Gurvature constant at 1.32×10^{-60} m. The method employed converting kg to keV and N to joules/meter, then from joules to keV. The resulting force had units of keV² per meter, which is interesting in a Cosmic Rearrangement Hypothesis as well as a description of light as an electric circuit, because of c^2 .

MOND has failed spectacularly under a traditional mechanical model, however the author wants to lay a metaphysical and natural philosophæ foundation, as well as rework some **classic Newtonian formula** working on the same or similar basis. The goal is to move from here towards Gaussian-Maxwellian equations, shifting energy discussions from Nm to keV². Central to this work will be the issues of momentum, kinetic energy, sound waves, force, and power. Impulses of momentum are to be considered in terms of electrical work and power.

It is suggested that an entire basis for a MOND2, as well as the foundations of electro-thermodynamics, be unified under similar assumptions in each paper, to form a solid basis for a new PEMD - plasma-electromagnetic dynamics. PEMD will be automatically unified with CRH via the UAF, forming a fairly complete Unified Theory. The unison of PEMD, MHD, and QED should be **concordantly** performed with a reworking of Relativity theory using only tensors (no pseudo tensors) that follow the 5 laws of Thermodynamics.

Keywords: Momentum - force - energy - power - electrodynamics - keV - Conservation - MOND

Review of MOND2 Gravity -electrogravity- in PEMD

$$"F = G \frac{M_1 M_2}{r^2} \text{ where } G = 6.6743 \times 10^{-11} \frac{Nm^2}{kg^2} \quad (1)$$

In terms of units this makes the equation: $F(N) = 6.6743 \times 10^{-11} * kg^2 * N * m^2 * kg^{-2} * m^{-2} \quad (2)^2$

The issue is that kg is a shorthand for the electrostatic (QED) version.

¹ https://www.academia.edu/87940630/MESS0014_Gravity_as_a_Newtonian_PEMF_Resonance_and_Conservation

² Note all the units cancel out, which doesn't leave us understanding Newtons any closer. The author suspects that the joule is really dependent on this, but later they determined how many keV a joule really is worth in terms of keV. From there one could convert j/N as a distance to kg back through keV.

$$1 \text{ kg} = 5.60959 \times 10^{32} \text{ keV} \quad \& \quad 1 \text{ N} = 1 \text{ jm}^{-1} \quad (3)^3$$

$$\text{So that G is really } \frac{6.6743E-11 \text{ jm}}{3.15E65 \text{ keV}} \text{ where } 1 \text{ keV} = 1.60218E-16 \text{ j} \quad (4)$$

$$\text{If you complete the conversion, then you arrive at G, now } k_G (\text{Gurvature}^4) \text{ is } 1.32 \times 10^{-60} \text{ m} \quad (5)^5$$

...

$$\rightarrow F_{EG} \text{ units} = k_G(m) \left[\frac{\text{kg}^2}{\text{m}^2} \right] \text{ and see (3) for a substitution. In units, you will end up with } \text{keV}^2 \text{m}^{-1} \quad (7)^{66}$$

Momentum

$P = m\mathbf{v}$, where velocity is distance over time. Therefore we have the transformation of kg to keV which changes the units of momentum to keVms⁻¹. The other way of looking at this is as it is called Ns, which makes it jsm⁻¹. **Joules can be directly converted to keV, so that you can get keVsm⁻¹!**

P =	kg	m	=	keV	m	!=	P[U]	=N ⁷	s	=	keV	s	=	j	s	=	keV	s
		s			s						m			m			m	

This is a very confusing conundrum, so clearly there is an issue with the definition of kilograms. Note that m/s is velocity, which in a major way is the opposite of inertia, and inertia seems to be related to mass because Sir Newton said,

*"if a body is at rest or moving at a constant speed in a straight line, it will remain at rest or keep moving in a straight line at constant speed unless it is acted upon by a **force**."*⁸

We see, therefore, that speed (velocity) is related to force. But force is defined also by mass. $F = ma$, where acceleration is an integral of velocity. Mass in kg, as stated before, is convertible directly to keV. So now we see that force is also in keV m/s²! Compare with (7) where gravitational force (not inertial) resulted in keV²/m. Again, we see a massive confusion, probably surrounding the ill-defined kilograms. But if gravity is related through the æther to inertia, as Distinti suggests, then it would be directly related. But this is theoretical.

The Unit conversion for Newtons is to kg-f (kilogram-force). This suggests that Force is a N/kg. Newtons are j/m and that is keV/m while kg are also keV! So by this suggestion, force is now simply the inverse of distance! **What is going on with Newtonian mechanics?!**

It seems to the author that we need to decide exactly what momentum (propensity to move), as an inverse to inertia, is precisely. If inertia is resistance to motion within the æther, then momentum would be the inverse, or conductance. Instead of reluctance to motion, there is instead an urgency to move within the æther. Another way to say this is that the motion, as it consumes æther, creates the steady *velocity* in the counterspace, and has a steady, apparently infinite supply of energy for consumption and propagation. Otherwise there is no mechanism for Newton's First Law's second part. The first part is fairly intuitive... without a pressure, why would anything move? But then it gets moving and stays at that motion? No one seems to have questioned this, for it is incredibly unintuitive (though we now know how to calculate friction⁹).

³ <https://www.unitsconverters.com/en/Kg-To-Kev/Utu-3509-3461>

⁴

https://www.academia.edu/87898394/MESS0013_The_crossing_of_POS_Theory_and_time_as_a_subset_of_Change_Theory

⁵ Electrogravitics

⁶ https://www.academia.edu/87940630/MESS0014_Gravity_as_a_Newtonian_PEMF_Resonance_and_Conservation

⁷ N→kgms⁻²; So P in Ns→kgm/s which is why the Newtonian mechanics work; but this is in terms of pure substitution.

⁸ <https://www.britannica.com/science/law-of-inertia>

⁹ Friction, the normal force, etc. will be the subject of discussion within another MOND2 MESSy paper.

It could be that the *author* is *confused*, the issue is, after all, very confusing. Texts everywhere make it very clear you can directly convert kg, N, and J to keV; but upon doing so, you run into issues of inverted velocity! It appears when Momentum is discussed as $\text{kg} \cdot \text{v}$ you have m/s, but if it is discussed as Newton-meters, you end up with s/m or v^{-1} . This is like an argument about momentum from the perspective of the Aether. The former, a description of the momentous velocity results in an opposing idea to the Force perspective, notably that the velocity is inverted. It is as if momentum - from the force's perspective - is how inertial the object is. That seems incredibly close to Distinti's and Thornhill's idea.

Remember, all we were trying to accomplish was a simple conversion to electron volts, where a Unified Force is not only proposed, but is found in quantum mechanics. There's no reason to suspect that this should be a bad idea, given the chemists' and physicists' suggestion that mass on a larger scale is merely the summation (linearly, with superposition) of small particles into larger and larger atomic ME.

But what if, in fact, gravity, inertia, and mass are directly related to charge? In a later section we will look at the charge-force equation, and return to the kg discussion. But from this one section we can see why MOND has failed in experiment. Sir Newton, mystic genius and math savant though he was, had no mechanism to describe the *why* or *how* his mechanics worked. He only knew that they worked. His conventions were simple algebra, but lacked the subtlety to describe the specific *relative* nuances of what is actually occurring in the interaction of space and counterspace; of atomic ME and æther; of force, energy, and charge! How has this failure remained all of these centuries? Convenience is hard to be rid of, especially if it is traditional, though wrong.

The mimsical expressions of Newton do work, but they really are not descriptors of what is happening, but mere placeholders for better expressions. MOND2 - PEMD - will fix the issues, by first tackling the electrodynamic and logic issues. Then, when the philosophical ethos of the metaphysical and natural physical reality is reified and solidified, there will be no more confusion. It will be a simple fact of life. When mass is measured in kg the assumptions about inertia are so ingrained, it's taken for granted. That has to end. And the reason we know these assumptions are a problem of discrete modes of motion/momentum is the inertial moments from rest to velocity $\neq 0$ (or vice versa). "It moves anyways," Galileo said... but he didn't know how. Einstein didn't address this either. Kepler's laws of motion show conservation, but do they show causation? No.

Kinetic (and Potential) Energy

$KE = \frac{1}{2}mv^2 = \frac{Pv}{2}$. Well, we certainly have found the origin of the problem, or the targeting issue.

Energy, clearly, is related to this momentum, be it a zero velocity, or non-zero velocity. Even if we included into potential energy in the mc^2 , the dominance is not in mass, but in velocity. Velocity, however, if light is a circuit, is not as much about distance over time, as the rate of the induction (in distance) over the time. Think about it this way: the light circuit has an internal potential, activating through polar oscillations that include a magnetic *and* an electric part. This is an indisputable fact. Therefore the particle's energy is related to an electric charge combined with an electrical energetic state. When this happens, the particle's motion now has momentum and internal potential energy (propensity). Both require conservation, thermally and radiatively. Even the decay shows conservation. Assume, for the moment, that the entire lot is one PE summation, made up of all parts, as if uniform. When the particle converts to KE, then, the charge energy is conserved, and the momentous energy is conserved. None of this is controversial.

What does seem to be controversial, based on the last section, is the definition of the ME... typically related as $e = mc^2$, but also related, as discussed, to the consumption of æther. The object at rest is consuming energy, and the object at steady velocity is said to be consuming the same energy. But as it moves from rest to

motion or motion to rest, energy is then consumed, as a mass-force. It might be consumed in the field, or in other atomic-ME through friction, sound, etc. But it is definitely consumed. This is arbitrary, just as the river trigram of Relativity would suggest. Discrete, sudden behavior changes which appear arbitrary.

But they aren't. The arbitrariness is removed by the use of the description of the consumption or anti-consumption of the æther as an object at rest (anti-speed) which has a different behavior than the object at motion. This is a polarity. Also, however, the object at steady state of velocity has a polar relationship with those that are in acceleration (within the Force), related as said before by F/a or $Fs^2m^{-1} = kg \rightarrow keV$. (8)

But F is in Newtons, or j/m or $keVsm^{-1}$, so that $kg \rightarrow keV = keVs^3m^2$. (9)

If you balance this, the Force eliminates itself so that velocity² seconds. The electrical portion reduces, (ignoring the scalar constants), and what is left is the idea that time is the inverse of velocity squared. Again, if this is not about distance but the rate of induction, then $e = mc^2$ now begins to make some sense.

So where does the one-half come in? The energy consumption appears split between the real space and the counterspace *via the Aether* which is being consumed. As the motion - the velocity-momentum (aka Kinetic Energy) - is three modded with only a polar option, then 2^3 makes 8 laws.

1. 0 velocity = 0 momentum = 0 Change = 100% propensity to *no motion*
2. Accelerating or integrated velocity = changing momentum = consumptive change = 50% reluctance, 50% propensity
3. non-0 velocity = non-0 momentum = Change = 100% propensity to motion

Potential Energy

$U = mgh$, where g is the gravitational field, and h is the height, and m is the mass (in kg). But $kg \rightarrow keV$ so that we end up with $keVm^2s^{-2}$ or $keV * velocity^2$. This is **very similar** in concept/design to $e = mc^2$ since $kg \rightarrow keV$, so long as c , the rate of induction is measured in m/s (as it currently is). This goes a long way to setting a foundation for the new relativity, particularly Special Relativity.

Potential energy... voltage... this seems to be the crux of the issue. The equation for voltage is:

$V=IR$, which are units of amperage and Ω (amp- Ω), where an amp is a Watt / Volt. (10)

$\rightarrow Volts = WV^{-1}\Omega$. Since $R=V/I$, this completes the circle with Kirchoff's equations. (11)

Watts = Amps * Volts = Amps * $W^*\Omega$ / Volts; so that $V^2 = Watts * \Omega$, where Ω represents a form of reluctance (officially the inverse of conductivity). (12)

Therefore a volt is a $(W-\Omega)^{1/2}$. Mechanically a Watt has been defined, in terms of KE for a long time. $1 W = 1 js^{-1}$. Therefore a volt² is a $j-\Omega$ per second. Since a j can be converted to keV , we end up at a place where $V^2 = keV \Omega/sec$. (13)

But $keV = QxV$, where Q represents the electric charge *potential*, therefore

❖ $V^2 = QV \Omega/sec \rightarrow$ potential is Charge * Resistance per second. (14)

Consider, therefore, since a Watt is j/s , and N is j/m ... then m/s :

$j=Ws=Nm \rightarrow m/s = W/N$ (15)

Therefore a Newton is best defined not by kg , but as a Watt (power) / velocity.

If velocity is d/t , then we also see that distance is defined as a Watt-second per Newton.

If the Watt-second is converted to joules, then a distance is joules per Newton. And so we confirm the earlier work in a previous section. But more importantly we can return to the issue of $U=mgh$. Height is a distance, so that $U = kg \rightarrow keV * g * j/N$. Since $j \rightarrow keV$ then $U = keV * m/s^2 * keV/N$. The units of potential energy is also joules; therefore $j \rightarrow keV = \frac{keV^2 m}{Ns^2}$

We now can define time:

$$t = \sqrt{\frac{QV*d}{F}}, \text{ where force is measured in Newtons, Q is charge, V is voltage (potential)} \quad (16)$$

This probably makes d the charge gap, but for the purposes of height, we will then see that:
d=Ns² per keV; meaning that within the electrogravitic field:

$$\diamond U = \frac{M*g*Ns^2}{keV \rightarrow QV}, \text{ where g is the measured acceleration value} \quad (17)$$

→kg*m*N in the numerator and keV or coulomb-volts in the denominator.

$$\triangleright U(j) = \frac{kg \ m \ N}{QxV \rightarrow CV \rightarrow keV}, \text{ if N is converted to keV, then potential energy is mass * distance} \quad (18)$$

- If kg is converted to keV, then potential energy is distance * force
- If j is converted to keV, then potential energy, U, is the root of mass * distance * force
- If all are converted to keV, then charge is defined as distance over potential!

Since Q = current * time, we now see that charge d/V=l*t; therefore distance is also known as volt-amp-seconds, which means now we can see that as something accelerates within the æther:

$$\star F = \frac{V*A}{s} * mass(kg) \rightarrow keV \rightarrow CV = V^2A*C/s \quad (19)$$

Since power is V*I, we can rework this to mean that Power is: $\frac{Ft}{QV}$ or Newton-seconds per keV (20)

All considered, this might be a useful exercise to continue in perpetuum, but you get the gist. The simplex equations that come in have direct outcomes and meaning once you create a unit of “conserves” - in this case keV is used - and begins transforming to charge and potential, etc. Suddenly definitions for distance, time, force, and power escape the arbitrariness of numericalization, and enter the realm of relation to the detected force. The gravitational field constant (in acceleration terms) is not replaceable with electrogravitic terms, which can then be related back to a charge gap distance, of which the smallest unit now available is the k-Gurvature constant at 1.32×10^{-60} m. If this number is reworked from a distance into charge-potential, then a great deal of resolution should be possible.

Sound Waves

Looking at the equations for sound waves, in Galileo’s analysis, we see a certain amount of complex complication to the acoustic model¹⁰. Skipping to the end, P(t) = velocity x force, and we find that Intensity (in Watts per square meter) is:

$$Int. = \frac{1}{2} A^2 \omega^2 \rho v, \text{ where } v(velocity) = \sqrt{\frac{B}{\rho}}, \text{ where B is the Bulk Modulus in the medium and temperature}$$

Wm⁻² is convertible via the same methods in previous part, but again we see that Watts are Newtons*velocity, or Force x velocity. The same issues circle around. That’s to be expected, when the Law of Rotation and Vibration both feed directly into the Law of Polarity - the PEM-Force in a 8-layer filter. From there the energy of that Law feeds directly into the Law of Resonance. Here, the harmonics are directly related to the intensity (or pressure wave), as it moves through the medium (usually air). The result of this thought process is that, mimsically speaking, the A power modulation of the Law of Rotation (above) and mediation between the Laws of Vibration and Polarity, is *possibly* a matter of waves, rippling - induced - in the ætheric medium. Without a doubt there is a *circling* around the issue of the rate of c.

¹⁰ <https://galileo.phys.virginia.edu/classes/152.mf1i.spring02/SoundWaves.htm>

Force

$F = k \frac{Q_1 Q_2}{r^2}$ where k changes in the medium but has units of $\frac{Nm^2}{C^2}$. The resultant, once again, is

measured in Newtons. Above in (19) an alternate definition of the Force has been given. Consider, under certain assumptions, these equations could be set to an equivalent. It should be possible, then, to find a k equation not reliant only upon direct measure but the general idea of force. What would be needed, however, would be the flux or current in that medium, and that isn't easy with Aether. The flux - and therefore current - in the Aether is not known. The rate of induction, c , is measured as a velocity, which is known in an assumed medium of "vacuum" - the counterspace - to be 100% of c , where c is so named because it is considered constant and as the **only** constant observer. Relatively speaking, therefore, we are not sure if c is the only constant observer position, or if there simply is no observer at all, or no constant at all. We are only reasonably sure that c represents a maximum rate of induction in the æther when the æther is either a) a fictional space-time that bends or b) the unreal counterspace, or c) the sea of charge if that charge was approaching point-charge diameters. The k_G constant calculated certainly is much smaller than the Planck Length, so it might fit the bill, and has numerical support, being both deca-micro in magnitude and a unique scalar multiplier. Perhaps, then the Force is moving in force-quanta - pressure waves (see Sound above) - at this incredibly short distance, and these are what individual units of charge (Coulombs) should be.

It may interest the reader to note that the Δ for orders of magnitude of the k_G and PL is 25 orders, while the difference between k and G is 20 orders of magnitude¹¹. There may be some sort of correlation, or none... but if there is, it should indicate a remaining gap.

Work & Power

A working power equation of interest was given in (20). But our main interest is in noting that the Watt / time is power, and so is current * voltage; such that Potential becomes the Watt / amp / s. As current (I) is a flux over time, then Potential becomes a Watt (work, or d/t) divided by the charge flux. The subject of flux will be returned to in another PEMD paper covering flux, divergence, curl, and curvature, in an attempt to relate the flux in the Aether - in the "space-time" 'warp' caused by the fractal geometrical curved surface of the toroid to the PEMF. The PEMD should, after all, rely upon the PEMF directly. All work performed within the real, should be defined by the work performed, within the power of the abstracted, reified Unified Field. In other words, the non-æther depends upon the motions of the Sea of Charge where potentiality is birthed as per (17) & (18). The only issue is in relating the Δ between Q_1 and Q_2 when the distance is at k_G , and measuring it within a nucleus, or even within two atoms. What probe can measure even at the eV level, let alone PL or k_G level of resolution? The author suspects this is the primary reason it is easier to use a 'force' that is 10^{37-39} times weaker than the Force as a means of finding what is clearly a macrolytic effect (gravity as we observe 'falling' to be). Certainly Sir Newton could not have been expected to locate this mechanism, nor any modern lab. But if the æther is consumed, power is generated, and it is being used to create an inertial effect in a **"gravitational" field**. That is, if units are conserved, an **electrogravitic or potential relationship**. The relationship defines the field, and it is through the 5 portions of the PEMF, and the 5 portions of the mechanistic, which arises out of the Law of Rotation at the A power junction (c region) and proceeds to push for Thunder-rotation through the Polar Force to reach the Resonance, thus generating a yin or yang pairing. The most fundamental of these pairs is space and counterspace, but that's academic. We are primarily interested in how in the real physical Universe, Resonance - through sound and waves - expresses the electrodynamic effects and causation to generate

¹¹ <https://www.physicsclassroom.com/class/estatics/Lesson-3/Coulomb-s-Law>

fluctuation (Evolutionary Chaos) in the Aether. The expression of potentiality is the “Work” we are - mimsically speaking - interested in. That is what gives us more and more power: work, over time¹².

Conclusion

The author has found some unique equation relationships by looking into the use of keV - charge x voltage - as a “Conserve” unit, of a sort. By replacing various units a more unique, circuitous (but not circular reasoning) vision of an electrodynamic reality begins to emerge. The author is not Weber or Maxwell, etc. and doesn't propose to have done more than simple calculation of k_G and a comparison of unit conversions. However, within a short distance of work problems with the Newton and kg began to appear suggesting there are conundrums surrounding velocity and Newton's 1st law, straining either Conservation, or the non-ætheric classical mechanics. Newton himself suspected a force and æther, but had no proof of either. Meanwhile classical EM work in the 1800s provided a strong foundation for potentiality, and this led to useful definitions for time and distance, force, and ultimately power. As we “work” through these PEMD discussions, the goal is not to “throw the baby out with the bathwater” but to call into question bad assumptions and to seriously improve on commonly used/taught mechanical models of how the world really works. This is not a textbook, and not a replacement course. This is an EPEMC MESSy, which means some mimsical analysis and elements take place within the PEMD model, thus far. They probably will continue, as well, because outside of the materialistic applications of the MIMS, there is the utilization of the laws in the P power (which controls the A power).

Finally, the author wishes to speak upon the possibility that momentum impulses are more interesting than velocity. $\Delta P = \frac{mv}{t}$, but since $v = m/s$ then you have mass * acceleration - that is to say Force. With more electrodynamic transformations, the concept of momentum impulses can be altered quite well into a PEMD model.

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¹² If a person wishes to achieve strength and power, without violence, let them work over-time at any task!