

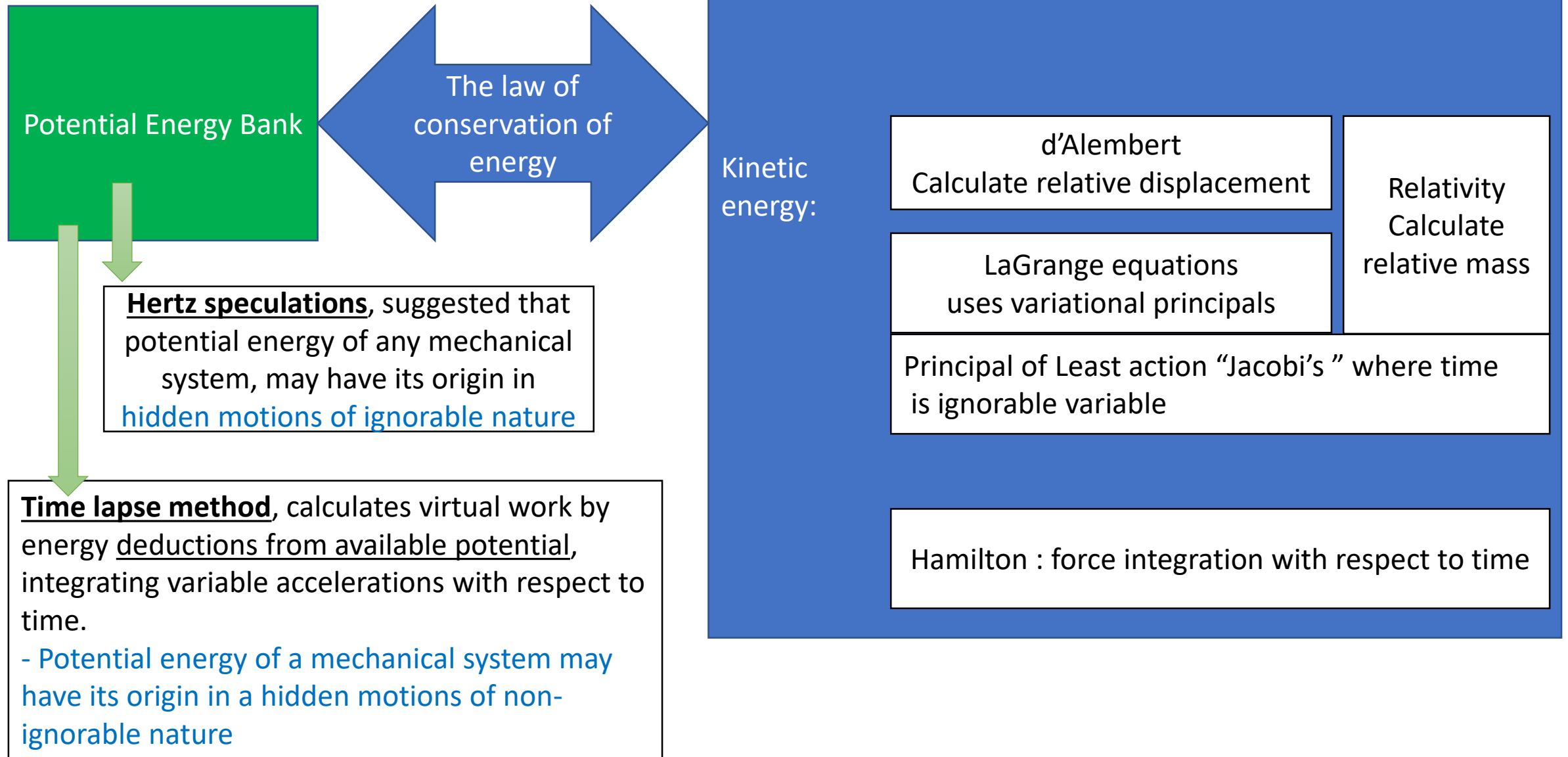
Abstract: E01.00081 : Time is a form of energy in a relative motion work energy equation

Author: Ibrahim. M Hanna

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- A new relative motion work energy equation where time is an independent coordinate index rather than a correction variable, and using the Newtonian relativity/Galilean transformation shows that time can be used as a form of energy exchange, where $E = 1/2 * m_f * g^2 * t$, measured by $(kg * meter^2 / s^3)$ and where m_f stand for mass force which is time independent value in work energy (kg), where g is an universal acceleration of gravity (m/s^2) , t (second) is the time lapse of a free falling object to reach the average speed of system motion.
- Contest example: A piston in Direct injection cylinder moves in a lesser kinetic energy level, and lesser cylinder internal pressure than comparable indirect injection piston. Using equation like $W = F * ds$ or kinetic energy $(E = 1/2 * m * v^2)$ give the incorrect impression that direct injection is less efficient, while using relative motion equation, shows that the lesser the time index, and lesser the piston speed, the higher the work efficiency is. Using similar fuel, the thermal equivalent is $(E1 = E2)$ and $(m_f1 * t1 = m_f2 * t2)$ or $(Work1 * t1 = Work2 * t2)$. the lesser the system speed is the higher the time independent work energy per second is and the shorter the relative distance of displacement is compared with the traveled actual physical distance.

2-Newton Laws = Physics established



3-Potential Energy as a function of time

Potential energy output(t) : P.E = $\frac{1}{2} Mf \cdot g^2 \cdot t$. For a linear motion, If the value was calculated as a kinetic output, knowing the mass and velocity, then the potential work input is multiplied by(2). If the value was calculated as potential work input from known energy value (Joule) and from known mass, then kinetic output is divided by (2). Example:

Potential energy input 9600 Joule, used to accelerate a mass M= 100Kg , then $9600 = \frac{1}{2} * 100 * 9.8^2 * t$ where t= 2 sec of potential time. , Kinetic output = $(\frac{1}{2} * 100 * 9.8^2) / 2$ and t= 1 second of kinetic motion.

• Knowing the speed and weight of a mass: having Mf=100Kg and instantaneous speed v=gt=19.6 m/s, where t= 2 sec.

Then Kinetic energy = $\frac{1}{2} Mf * g^2 * t = \frac{1}{2} * 100 * 96^2 = 9600$ Joules , to calculate equivalent potential energy we multiple by 2, where P.E(t) = $2 * (\frac{1}{2} Mf * g^2 * t = 100 * 96^2) = 19200$ Joules. And K.E(position) = $\frac{1}{2} * m * V^2 = 19208$ Joules.

The title “**Time as a form of energy**” , comes from energy as a function of time, with either :

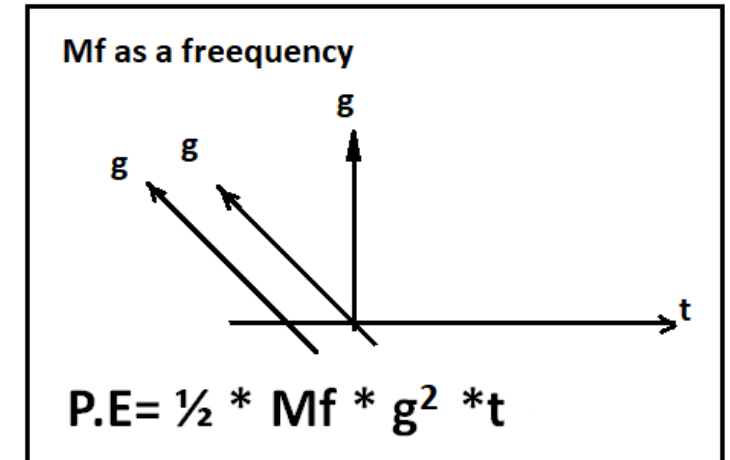
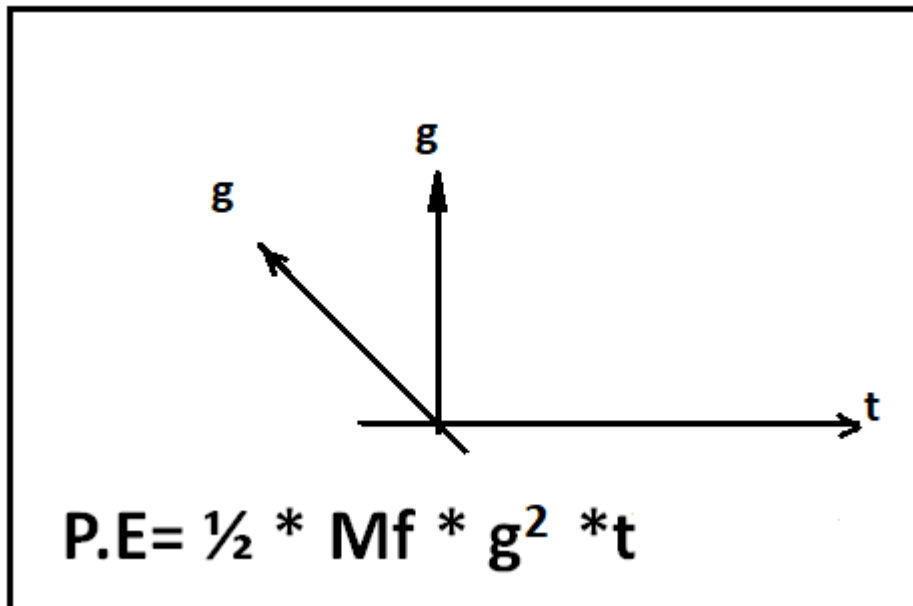
- 1) Motion is a function of time: Work Energy as a function of time W.E(t) \neq Work Energy as a function of position W.E(p).
- 2) Motion is a function of position: Work energy as a function of time W.E(t)= Work Energy as a function of position W.E(p)

As a function of time:

Work E(t) = Potential output (t) /s = Work E(p) \pm Energy change as a function of time

4-Definitions:

- Like force accelerates a mass , time accelerates potential energy.
- motion is a function of time when acceleration is of the second power.
- For a motion that may be associated with acceleration recovery forces, A third coordinate of acceleration can be used, which would mean a secondary force input like for example, recovery forces applied to a relative motion cylinder, or a tidal wave enforcing a surface wave that is lifting a ship, where such arrangement of coordinates shall not change the unit of potential energy (kg-m²/S³) and shall apply as a frequency of a vector force acting on a mass. For that we may use the term force Frequency



Mf= frequency of force acting on a mass, example energy recovery can be added to coordinate system as a second (g) acting as a function of time

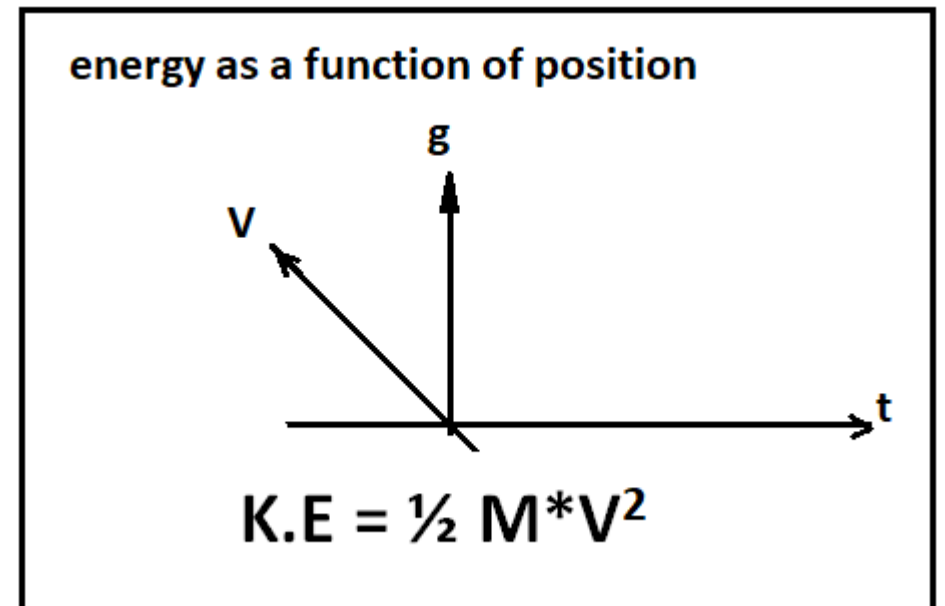
5-Background for bridging the gap between quantum & Classical mechanics

- 1) **Argument of Relativity as a function of time:** (piston example using a similar cylinder and similar fuel volume and compression ratios where the premixed fuel combustion offers bigger piston stroke force and velocity than a direct injection combustion). according to known relativity methods of position corrections, we may conclude that a relative motion is shorter in the pre-mix case, being traveled a similar physical distance, using similar initial fuel in a shorter time, the problem to solve is knowing that the premix method is less efficient. And a relative distance calculation must conclude a shorter relative distance in the direct injection case. **Relativity as a function of time using the potential power equation** output ($E = \frac{1}{2} m f \cdot g^2 t$) with lesser acceleration time lapse associated with direct injection, means lesser energy spent with lesser acceleration time spent during the work task, and that is equivalent of shorter relative distance. For that we may conclude that time lapse is a correct method to measure a relative distance whenever motion is a function of time.
- 2) **Argument of Quantum mechanics:**
 - To express the problem in terms of Quantum mechanics, we may try to answer the question why direct injection causes higher potential availability, by naturally thinking that obstructing acceleration may on microscopic level cause that combustion particles act on each other many times more and that may give a reason of increasing level of probabilities or frequency of working forces where the more violent microscopic motions is being the nature of potential energy trying to accelerate and grow as a function of time .
- 3) **On the classical mechanics level: an occupying structure acting as a negative apparent mass caused that:**
 - Energy as a function of time requires calculating Pascal as a function of time.
 - Apparent conflict between Newton Laws and Quantum mechanics is a result of not using positions as a function of time, which requires finding an alternative way to use distance as a function of time, “**the universal time lapse**” instead of correcting relative motions on a metric scale.

6-Notes on potential power equation $E = \frac{1}{2} Mf \cdot g^2 \cdot t$:

Unit of energy as a function of time is different than unit of potential & kinetic as a function of position

- 1) Whenever energy is a function of time, we calculate kinetic energy as a deduction of available potential, rather than differentials or integrals of kinetic forces, where energy is a result of hidden potential motion that could be of non-ignorable value
- 2) The law of conservation shall apply only for energy as a function of position. we can not say $U_1 + K_1 = U_2 + K_2$ when energy is a function of time.
- 3) Potential energy acceleration is measured by Joule/ S^2 .
- 4) As a function of time, potential energy coordinates $= \text{Mass} \cdot g \cdot g \cdot \text{time lapse} = \text{Joule/ sec}$ where any change in time lapse can change the available energy, Joule/per second. (while kinetic energy coordinates $= \text{mass} \cdot g \cdot v \cdot \text{time lapse} = \text{Joule}$, where any change in time lapse can not change the value of Joules available for work) .



7-Notes on the Negative Mass experiment

The term **Negative Mass**, is an expression of a formation created in certain motions when position is a function of time.

- ❑ Such formation, like inertia, is an apparent formation associated with motion. However unlike inertia, Negative Mass is of usable energy gain.
- ❑ The expression “Negative Mass” was chosen because of the functionality of calculating Negative Work energy based on Newtons laws as well as the friendly coordinate mathematical use. ($-W = -M * F$)
- ❑ Other expressions were possible, like :
 - ✓ **Apparent mass**, which was avoided due to possible impression of non-usefulness.
 - ✓ **Relativistic mass**, which is associated with different uses and mathematical equations in relativity as a function of position.
 - ✓ **The void or absent mass**, with good lingual reference but not mathematical one.

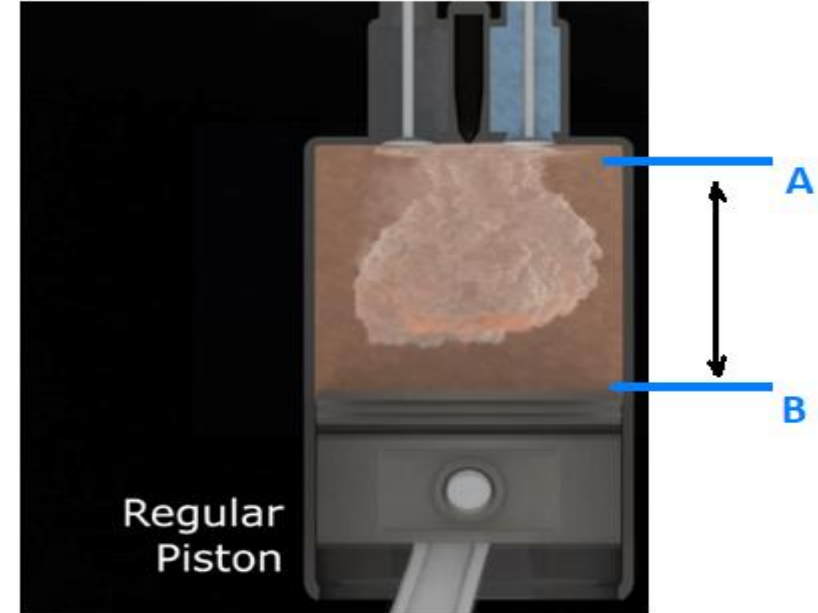
- 1) Non-particle Negative Mass as a tool of energy acceleration can be tested with Pascal as a function of time.
- 2) The microscopic Negative Mass formations may be suggested to be the reason of the higher efficiency of a direct injection combustion.
- 3) Negative Mass as the negative of time and acceleration, may explain why matter makes only 5% of universe energy.
- 4) The negative of time& acceleration can establish the equilibrium of potential energy.

8-Relative motion as a function of time



relative motion

- ❑ as a function of position, between A & B , a relative distance means a physical distance adjusted based on variable velocities.
- ❑ As a function of time, in one method, a relative distance means a physical distance adjusted based on time lapse needed under universal acceleration of the second power (g^2) where system motion acceleration $AT=gt$.



Adjusted acceleration :

$$AT = gt$$

when similar fuel thermal potential in a similar cylinder, creates different piston acceleration, then the relative distance A-B can only be calculated as a function of time , measured by Acceleration Time lapse between A& B

9-Introduction to energy as a function of time

The subject of energy as a function of time, is not properly covered in physics.

In classrooms when a student asks about a free falling object, why kinetic energy ($e = \frac{1}{2} mv^2$) & momentum ($P=mv$) do not seem to go hand by hand, teachers generalize the answer to be a function of position (referring that if we take two positions, we find that $U_1+K_1= U_2+K_2$) & students do not know the difference. The answer would be partly correct only if we specify that it applies only to motion as a function of position before reaching a terminal speed. The $U_1+K_1=U_2+K_2$ remains an observer art, that does not apply after 12 seconds of reaching a terminal speed. Instead if we divided energy ($E= \frac{1}{2} Mf \cdot g^2 \cdot t$) of a free falling object by time lapse it reaches, we will get the same answer of potential input before and after reaching a terminal speed, and if we divide by $(Mf \cdot g)$ we get a 4.9 N-m/s the inertia value, proving that energy is preserved as well as TIME being a form of energy.

Mother nature does not use fossil fuel to drive the universe & yet many scholars close the system of universe and speak of a cold expansion, as if allowing the concept of growing energy would break laws of conservation and allowing cold (acceleration) of universe does not. **Proposed goal of this study, is considering acceleration of universe as a function of storing an accelerated potential energy exactly like sending a satellite to orbit at higher elevations and velocities, requires additional input of energy.**

❑ **The main difficulty, anyone can face in approaching the subject is finding the right expressions and terminology, however If one asked, how I can put the relation of time & energy in few words?**

We may be able to put together the following statement:

1. acceleration in one aspect creates a non useful growth of accelerated energy .
2. In another aspect, Acceleration of the second power, as a function of time can create a non-particle Negative Mass (a mass void or volume deduction at lower accelerations), which can turn energy acceleration to energy gained from TIME.
3. In another aspect, Relativity as a function of time, means traveling at different time lapse of a universal acceleration between positions A and B, despite similar initial thermal potential.

10- Terminology

- ❑ The math of calculating growing potential energy as a function of time, can be confirmed in a method of applied physics expressed as a hybrid fuel & time engine, or (relative motion cylinder U.S App 16235272) however presenting the subject requires new terminology & this is how we can do it:
- ❑ First, a brief history of time relation to energy may include two statements for Hamilton & special relativity.
- ❑ then we can advance to required terminology and tools:
 - 1) a new **open system equation, we call the time lapse equation of potential power, or potential per second.**
 - 2) the term **Energy acceleration** measured by $N\cdot m/S^2$ or $Joule/S^2$.
 - 3) the **non particle – Negative Mass**
 - 4) Learn **how we calculate Pascal as a function of time** (experiment).
 - 5) Learn how time lapse equation help us manage the **non-equilibrium of potential energy in a simple monitoring tool** .
 - 6) Experience **a first look of a patent pending application of relative motion cylinder, that provides an energy acceleration example** & promise to double or even make more miles per gallon, from a limited potential fuel of combustion engine.

11- Brief History :

- ❑ Hamilton stated that when energy is not only a function of position but also of time , then laws of conservation do not hold and LaGrange equations do not apply.
- ❑ Special relativity stated that Energy = mass , and mass grow under acceleration.
 - ✓ This theory caused the race of discovering new particles
 - ✓ On the down side, we had an equation of three constants ($E= M*C^2$) & a universe mass that makes only about 5% of universal energy & for that reason energy responsible for the expanding universe was not solved.

Universe	Expansion
5% particle	Chilling expansion ?
25% dark mater 60 % un-known	
- TIME ?	Fueled expansion

12- How we calculate energy as a function of time,

By calculating the differential of position in a work energy equation , or the integral of kinetic energy changes

- This can be done by calculating position as a function of time, for a work potential . Adjusting for universal acceleration ($AT=gt$) and dividing work energy by work time to calculate the potential (POWER) or (energy per second)
- Using a differential equation of velocity & acceleration, position as a function of time is: $X(t) = \frac{1}{2} at^2 + v_0t + X_0$
- $X(t)/s = \frac{1}{2} at^2 / t = \frac{1}{2} a \cdot \text{time lapse}$ where initial $v_0=0$ & ($X_0=0$)
- **Adjusting for a unified acceleration a , $X(t)/s = \frac{1}{2} a \cdot t$** , and with initial velocity =0 >>>> $x(t) = \frac{1}{2} a \cdot \text{Time lapse of such acceleration}$
- Work Potential /s= $m \cdot a \cdot \frac{1}{2} a \cdot \text{time lapse}$, (using universal acceleration g) , we get
- **Work Potential input power or input /second $P.I/s = \frac{1}{2} mf \cdot g^2 t$ ($\text{Kg-m}^2 / \text{S}^3$) = $\text{N-m/s}^2 = \text{Joule/s}$**

- or calculating the integral of kinetic energy changes $P.I = \frac{1}{2} mV_1^2 + \frac{1}{2} mV_2^2 \dots = (\int \frac{1}{2} mg^2 t^2) / t$
- After adjusting for a unified universal acceleration , Potential Input, $P.I = \frac{1}{2} mg^2 t$
- **Work Potential power $P.I/s = \frac{1}{2} mf \cdot g^2 t$ ($\text{Kg-m}^2 / \text{S}^3$) = Potential /s = $(\text{Kg-m}^2 / \text{S}^2) / s = \text{N-m/s}^2 = \text{Joule/s}$**

The time lapse equation is represented by space coordinate where:

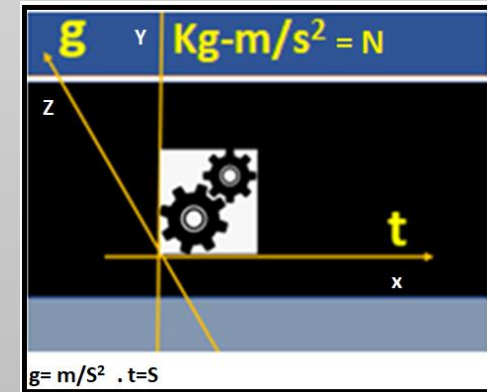
Coordinate X is time lapse, measured by Second (S)

Coordinate Y= Force = mass*g, measured by Newton = $\text{Kg-m/S}^2 = \text{N}$

Coordinate z measured by (g) acceleration m/S^2

Unit of accelerated Energy is a time cube of ($\text{kg-m}^2/\text{S}^3$) or Joule/s

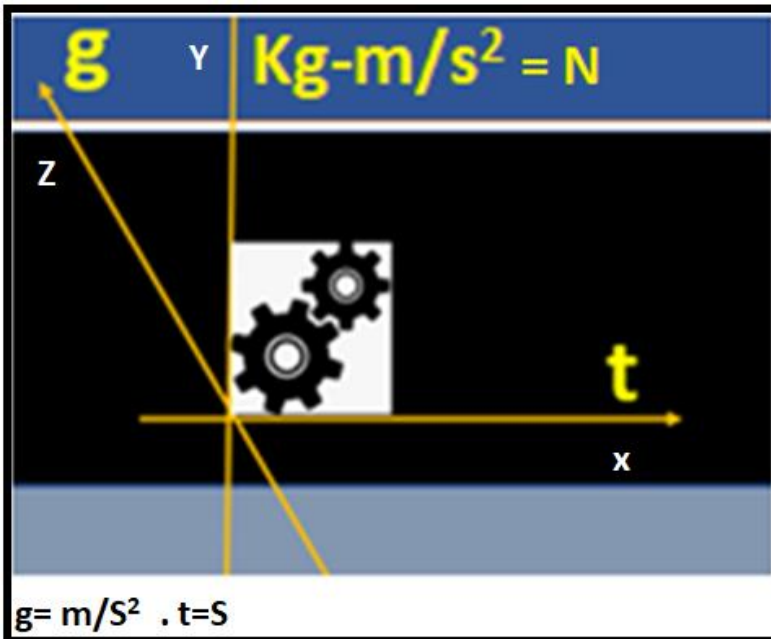
Energy Acceleration = $y \cdot z = \text{N-m/S}^2$ or Joule/S^2 , in exchange with time lapse.



13- What is: "Energy Acceleration" Joule/S² :
In Coordinate terms Energy Acceleration= Force* Acceleration (Newton* g)

- ❑ Coordinates : Y* Z : N* meter /S² = Joule /S² =energy acceleration as a form of exchange with time lapse on (x) .
- ❑ Potential acceleration = (N*meter /S²) = Joule/s²
- ❑ When a potential like x-cubic inch of fuel provides E= 1 joule/s for 1 working second of time @ a time lapse =1 , then E= 10 Joules/s for 1 working second, when time lapse =0.1 second

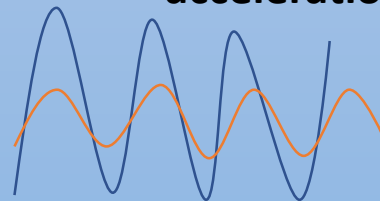
This 10 Joules, accelerated as a function of time, can be partly earned from time, based on either a role from Negative Mass or from relative distance.



Q: How we can minimize a time lapse ??

Answer: " that is a system design question".

In this relative cylinder motion example, we changed the magnitude of acceleration per cycle, by using a variable surface exposure



14- “ The Negative Mass” as a function of time

“ The Negative Mass” as a function of time

Q: What we may accomplish from interfering with acceleration?

A: Release potential energy previously stored at a higher time lapse motion, or

B: Create a Negative Mass which along with accelerated energy can produce useful energy gain from time.

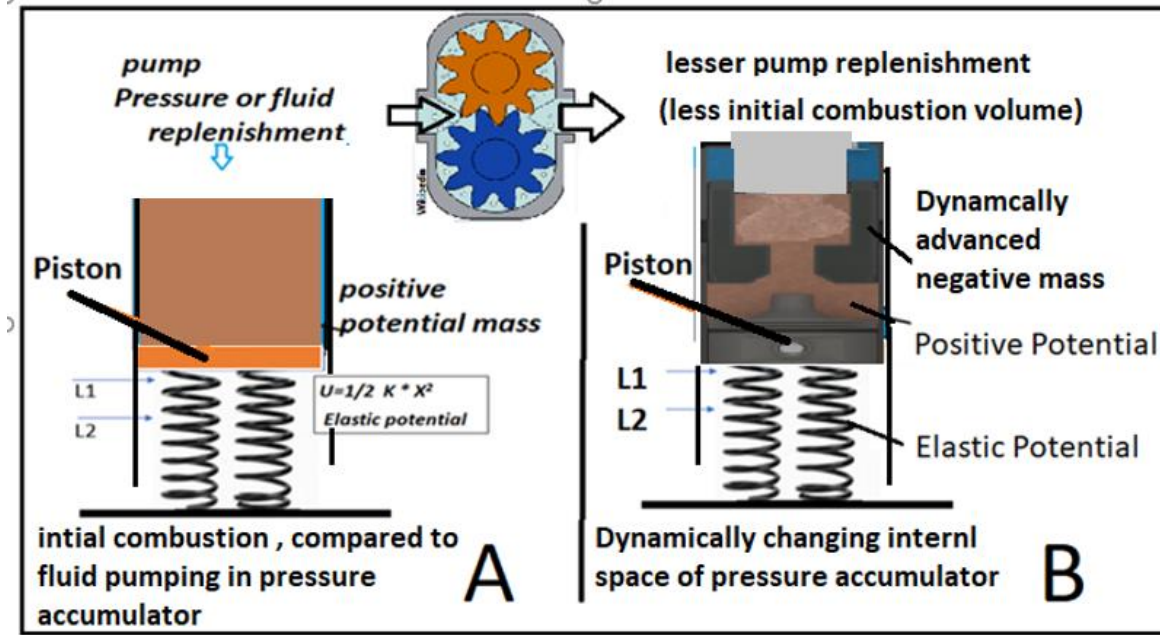
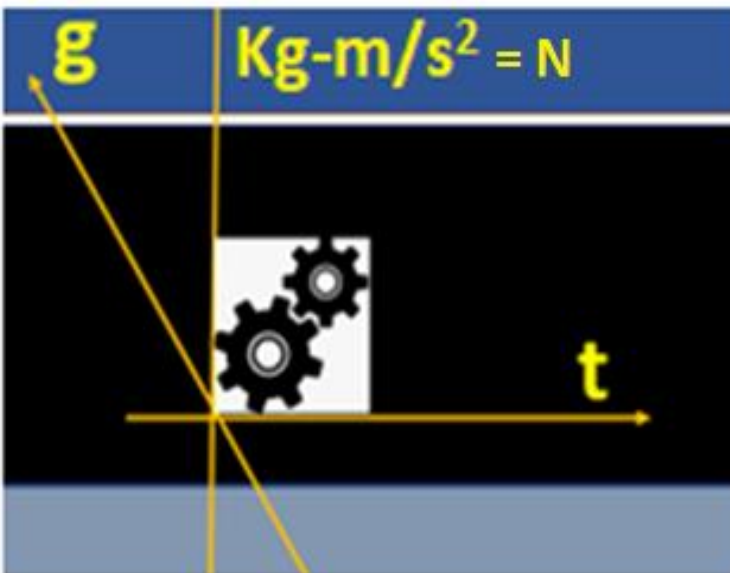
we know that moving a mass from point A to B consumes energy proportionate to mass weight & to distance, Now imagining that we have a mass that is somehow labeled (Negative weight) , then moving such mass between A&B will simply put a minus sign before the Work energy needed , and the consumption becomes production.

15- example of creating a working Negative Mass With alternative concept of Pascal as a function of time

experiment

Having two cylinders(B) - with occupying structure, dynamically advanced(accelerated) during higher internal pressure, and decelerated during lower pressure stage &.... (A) conventional

- Cylinder B, needed less combustion fluid from pump (at a first frame) to drive its piston (a second frame) at similar energy output like A
- Fluid Mass A (minus) B = a non-particle Negative Mass potential (that is the dynamic volume void of internal space).
- As a function of position, A&B are of equal energy output where: $E = \text{flow} * \text{head}$ (expressed usually as restoring energy to higher position of potential energy). At a first frame (pump) energy spent per liter against similar had is similar between the two systems.
- As function of time, energy stored in elastic potential of spring shows energy gain at B and calculating such gain needs a new equation that is open to time where work energy input/energy output is different
- As a function of position, Pascal can increase available force (Newton/s) for a loss in metric distance.
- As a function of time, Pascal can increase available work energy (Joule/s) for a loss in time lapse distance of acceleration between two position A&B.
- For a system to be open to time, relative motion conditions are to be met.



16- Calculating equilibrium of two potentials

i.e. testing for non-equilibrium efficiencies, of two systems, having similar thermal, mechanical or chemical potentials:

$$E_1 = E_2$$

$$Mf_1 * g^2 * t_1 = Mf_2 * g^2 * t_2$$

$$Mf_1 * g^2 = Mf_2 * g^2 * t_2 / t_1$$

$$\text{Potential acceleration 1} = \text{Potential Acceleration 2} * t_2 / t_1$$

The lower the time lapse of system 1, the better output it produces (more Joules) compared to system2, & that is based on energy exchanged with time.

Or

$$\text{Potential output: } \frac{1}{2} Mf * g^2 = E / t$$

$$\text{Potential output : Joule/s} = \text{Thermal equivalence/ time lapse}$$

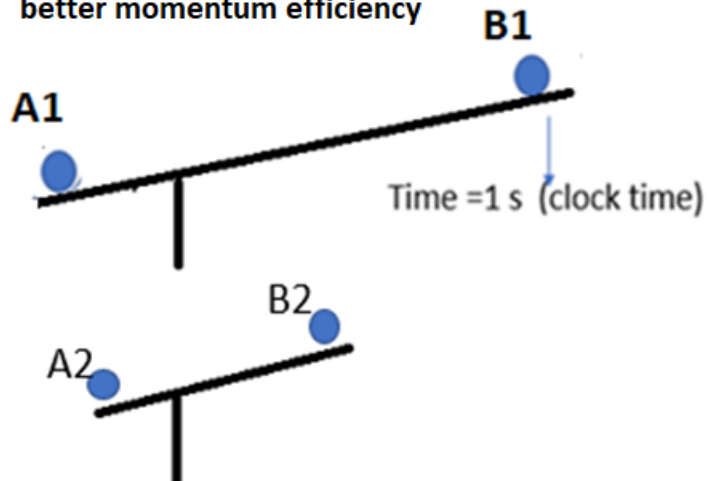
17- Example of kinetic non equilibrium

1. potential energy availability can not be correctly estimated using equations of position, because of the non equilibrium.
2. i.e ... For a system engineer using four objects of 1 kg each on two different levering systems, It could be misleading to find that a bigger momentum of body A1 than A2 , means more efficient system (real life example of chemical fuel potential, is a thermal –non-equilibrium of premix combustion engine VS direct injection)..
3. Using new time lapse method shows how A2 is more efficient.

non - equilibrium

Kinetic of A1, $E = 1/2 m \cdot v^2$, is bigger than A2
& simplified example of mis using momentum potential.

$E.O = 1/4 * M_f * g^2 * t$, correlates smaller(t) of A2 with
better momentum efficiency

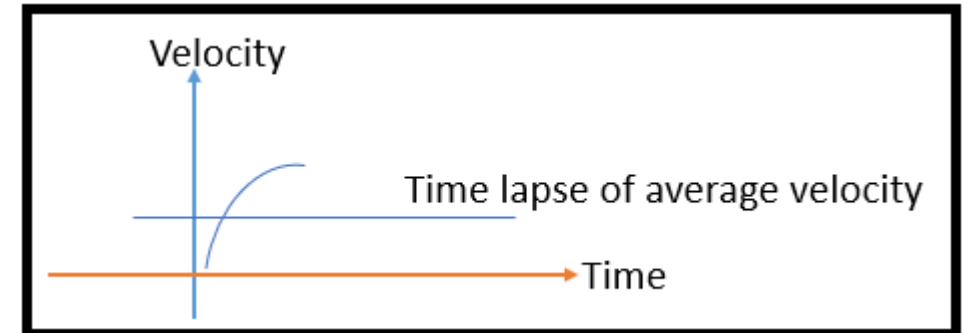


18- Conclusions:

- When a Negative Mass produces useful energy, and being a product of time & acceleration, then time becomes a form & a source of energy.
- When Negative Mass is part of a total potential power (chemical or mechanical or thermal) then calculating energy output from such potential, needs energy equation that is open to time.
- When **d'Alembert identified inertia** as the negative of mass & acceleration, he established kinetic equilibrium, Similarly:
Negative-mass as the negative of time & acceleration can **establish potential equilibrium.**

19- Time lapse is a simple monitoring tool of potential equilibrium

- ❑ **Potential output, can be monitored** (in case of linear motion) by an average speed of a piston or other system motion velocity, where such average is compared to the speed of a free falling body to take a time lapse value.
- ❑ As a general rule in physics , **kinetic Output** = $\frac{1}{2}$ Potential input.
- ❑ **Monitoring potential work output, as kinetic energy, can be simplified by calculating the average speed of a system motion (like a piston in a combustion cylinder).**



20- Energy as a function of time complies with laws of conservation

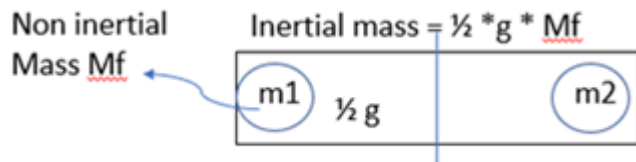
Time-lapse $P.E.I = \frac{1}{2} M_f * g^2 * t$, **helps surviving the need for corrections in relative motion.**

i.e, accelerating 1 Kg object of our planet surface for one meter, according to time lapse equation, requires 4.9 N-m/s of potential output (work input) regardless of its relative motion to the Sun or to the earth rotation around its axis

calculating work input/ distance of travel

- **Motion around the sun** @ $v_i = 30,000$ m/s . Time lapse when earth was created $t = v_i/g = 3,000$ second
W. Power = $\frac{1}{2} M_f * g^2 * t / (D/s) = 48 * 3,000 / 30,000 = 4.9 \text{ kg-m}^2/\text{s}^3$
- **Motion around earth center:** @ $v_i = 460$ m/s , Time lapse $t = v_i/g = 460/9.8 = 46.9$ s
W. Power = $\frac{1}{2} M_f * g^2 * t / (D/s) = 48 * 46.9 / 460 = 4.9 \text{ Kg-m}^2/\text{s}^3$

$\frac{1}{2} g$ is part of inertial mass



21- energy as a function of time , complies with Newton laws

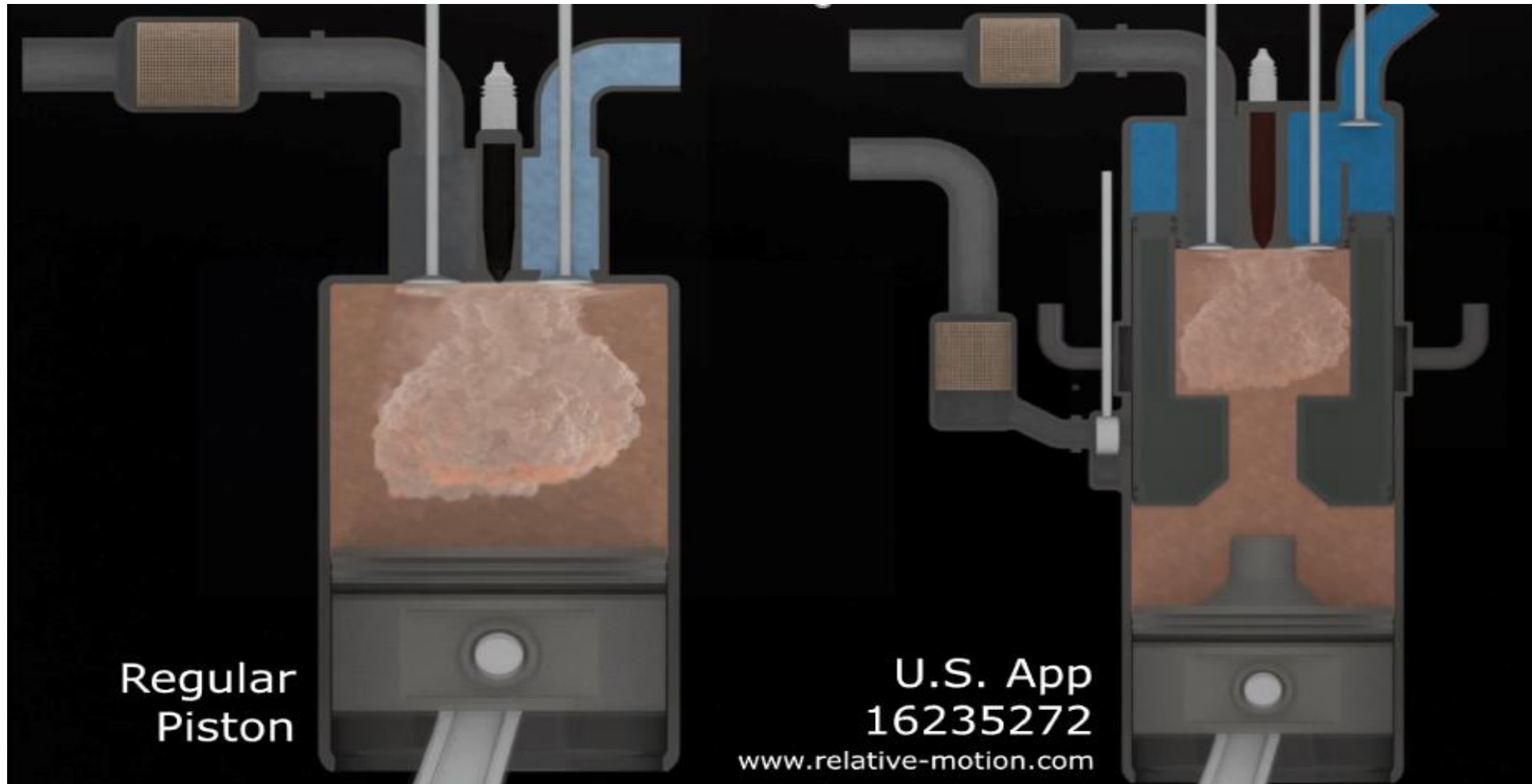
- ❑ energy gain from energy acceleration, happens under the rules of conservation.
- ❑ Newton laws apply when a relative distance is measured by time lapse instead of change of positions.
- ❑ Mechanical methods:
 - A. Negative Mass decreases requirements of combustion fluid and causes better equilibrium-output in a second frame of a piston motion.
 - B. The creation of a dynamic pressure accumulator, as a secondary result of using a space occupier as a Negative Mass, caused that energy recovery increased from 20 to 70-80% having recovered energy done by pumping fluid to a pressure accumulator at atmospheric pressure while in comparison, supercharged engines do recovery with pressure accumulated at about 15 atmospheric
 - C. Energy recovery along with using the Negative Mass method is a method used by nature and can be repeated in a relative motion cylinder, promising mileage enhancements limited only to mechanical system design capabilities being open to time.
 - D. Minimizing overall space of cylinder internal space provided about 200%-300% higher mean internal pressure, that resulted in increasing energy output, and in cleaner burning of hydrocarbons and nitrogen.

The take away is applied physics in a cleaner hybrid (Fuel & Time) engine



22- Time Relativity in applied physics

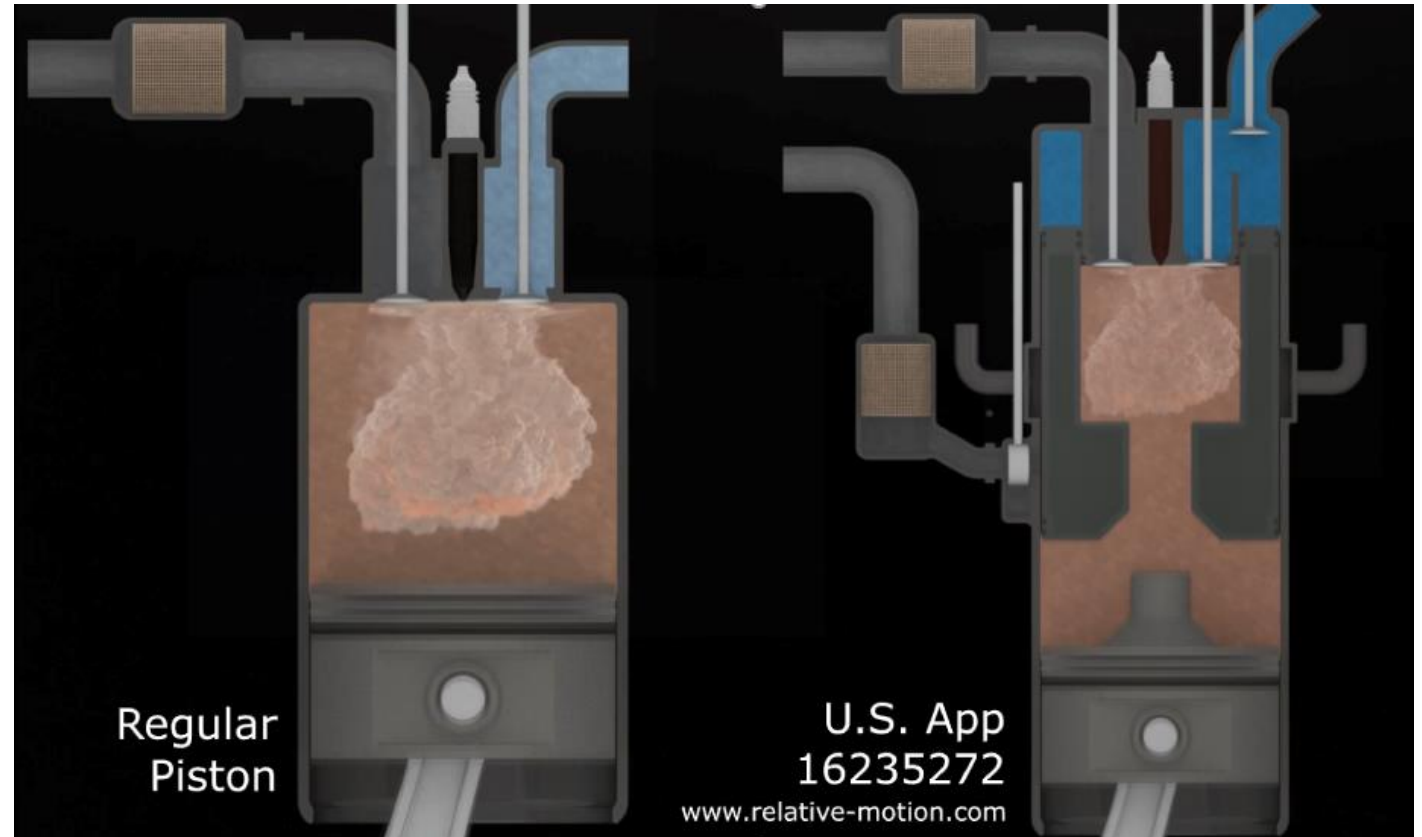
- *So much Physics on Relativity - Zero machines claim relative motion*
- here we created a negative working mass in a relative motion cylinder, by using two pistons reciprocating in the same direction..



23- Accomplished tasks using the relativity of time

1. expanding the thermal potential value output of a given volume of fuel..
2. Saving fuel, by using the Negative Mass potential as a product of time
3. meeting torque requirements from turbo recovery (blue) instead of increasing number of cylinders

New cylinder :
(1)combustion every stroke



24- Supporting simulation tests

Testing graphs reflect (a per stroke) time based energy improvements at lower acceleration:

Yellow = conventional cylinder, bigger (Force & velocity) Yet lower efficiency.

Red graph = Relative motion cylinder with Megative Mass gain,(area between red and yellow).

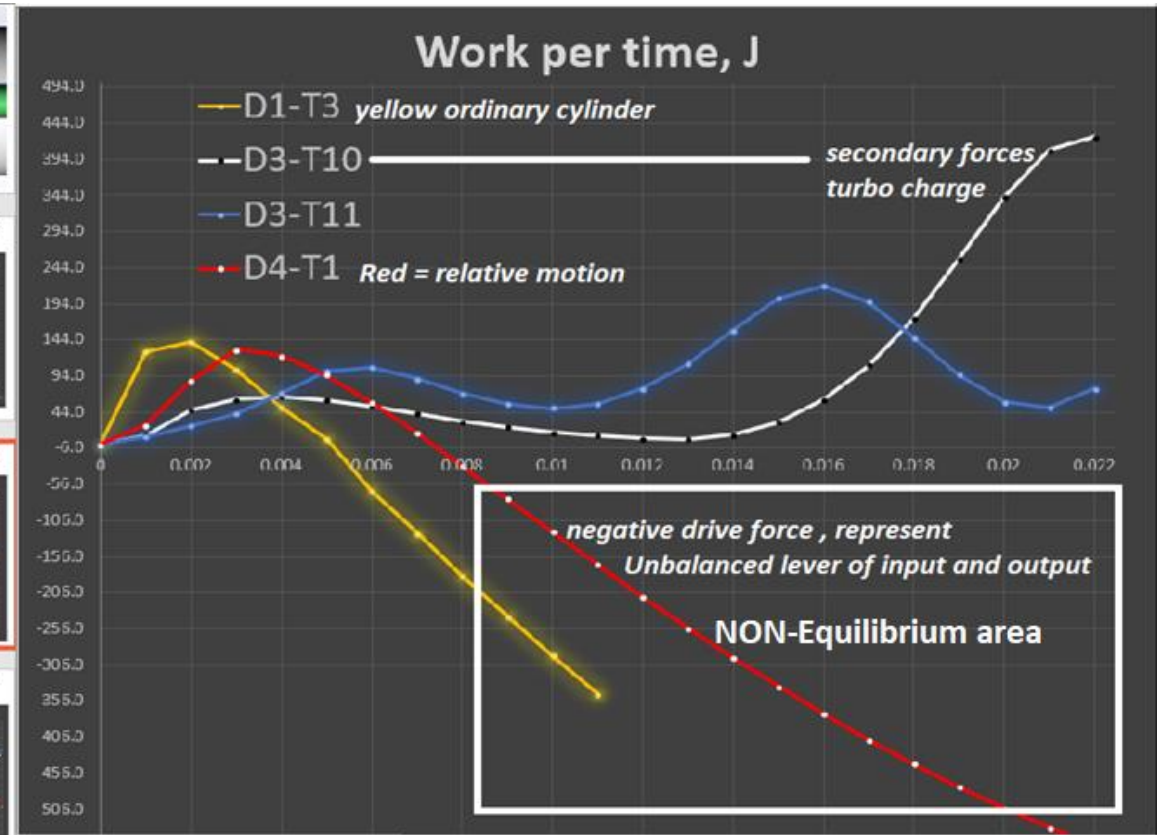
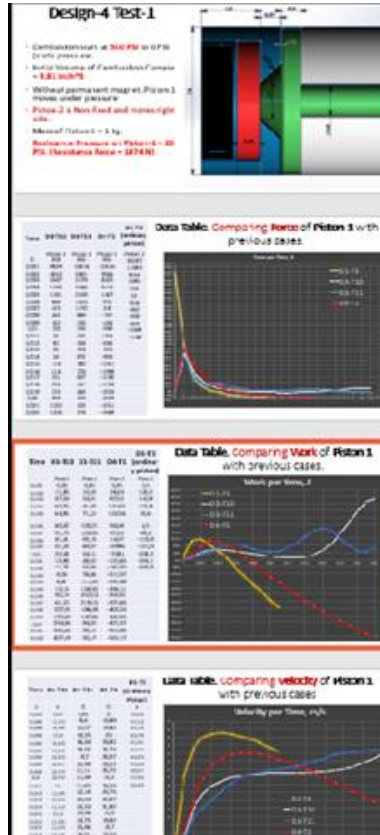
White graph = is when applying turbo charge recovery forces to second cylinder with gain reflected in area (between yellow and white) an example of acceleration recovery.

Equation used:

For work Input transferred to piston:

$W = \int \text{pressure} * \Delta \text{Volume}$
 (actual force at piston was used,
 $\int \text{Force} * \Delta \text{distance} / \text{time}$) .

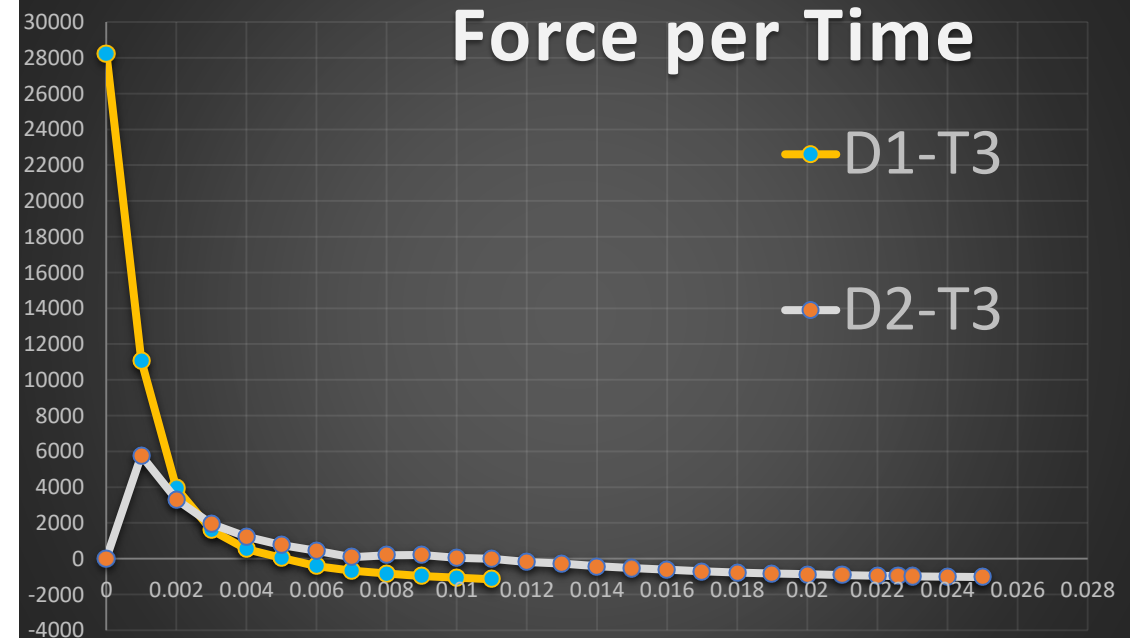
While Red line shows only about 50% work improvement, when we decreased fuel from 4.81 to 2.5 c.inches, red graph continued to show about 15% better work and that is due the in-equilibrium. Better calculations shall include time of acceleration.



25- Overall motion acceleration time & Newton

- If we asked a physicist why a vehicle still spends about 70% of its rated energy despite using a cruise control, where the vehicle does not accelerate. He might answer energy is mainly spent due to road friction.
- Going back to high school physics, we know that road friction actually doubles a wheel's kinetic energy (the rolling barrel chapter). And our physicist friend should have said, energy is spent due to acceleration spent on the cylinder level between its stopping and maximum speed points
- **Using a relative motion cylinder, white graph, where energy recovery or secondary energy spent** applied to a second piston reciprocating in the same direction behind the crankshaft piston, we may see that despite resisting load, the cylinder can use recovery forces to yield positive (work per time) graph at the end of each stroke which is uniformly communicated to a second cylinder, causing the acceleration time spent in the second cylinder to be minimized and vice versa.
- **Having acceleration time minimized at the cylinder level, by keeping each cylinder force positive at the end of the expansion stroke and communicating such force to the next cylinder, energy then is spent mainly to overcome friction and thermal losses.** And enhancements of 50% realized per stroke due to Negative Mass, can add to the overall vehicle motion acceleration savings, which can be hundreds percent simply based on Newton laws where energy spent is proportionate to acceleration time. (text books, measure cylinder performance only by dividing work per cycle by displacement per cycle , which means double cylinder performance with occupying structure, but that would be an inadequate simplification that requires also calculating time lapse of acceleration)

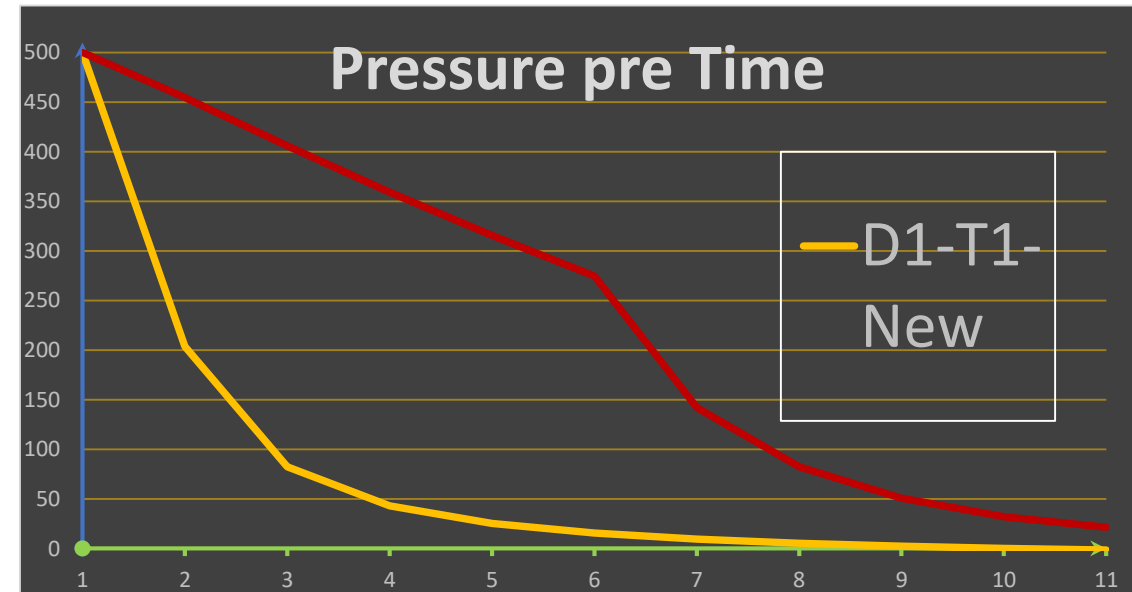
- **Ordinary cylinder**, using 4.81 c.inch of pre-mixed fuel in a similar cylinder, generated a force of 30,000 lb-on graph in the first 0.005 second, to drive a load of 1,100 lb. during the rest of expansion stroke after 0.010 second (force – load = negative).
- **Relative motion Cylinder generated about 7,000 lb of initial force**, offering much lesser vibration with longer time of positive(force-load output).
- When acceleration $a = \text{Force}/\text{mass}$, then acceleration of the conventional cylinder, is three times higher and using conventional equation $W = F \cdot d$, work energy is three times higher as well, spent to do the same job.
- **The time lapse equation helped calculate best equilibrium** that can provide better performance.



26- internal pressure graph

Pressure graph: Yellow = conventional cylinder. Red = relative motion cylinder.

- Internal pressure (in the combustion side , opposite side to piston) is about 100% -300% higher in average, in a relative motion cylinder (red) offering up to 500% better exhaust cleaner burning especially on CO and free radicals ,with a first time solution to have exhaust management at the cylinder level.
- On the piston side, pressure, as calculated for the work graph, was about halfway between red and yellow lines, but with better exhaust burning than conventional cylinder, having lesser acceleration decreased piston speed and eliminated the exhaust freeze area behind piston surface that usually happen as a result of piston higher speeds.



27 Justified Postulates

- **Justified postulates**

- 1) Time accelerates potential energy like force accelerates a mass.
- 2) Motion is a function of time, when acceleration is of the power square.
- 3) Relativity as a function of time , means traveling at different time lapse of a universal acceleration between positions A and B , despite equivalent initial thermal potential.
- 4) Acceleration under certain conditions may result in creating a non-particle Negative Mass (a space void) .
- 5) Accelerating a Negative Mass is a source of energy