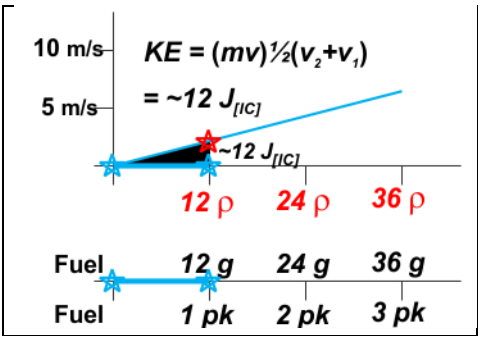
Deductions of the Space-sci Sherlocks



Why Fuel-Impulse Creates Energy

Professor Du-Ane Du

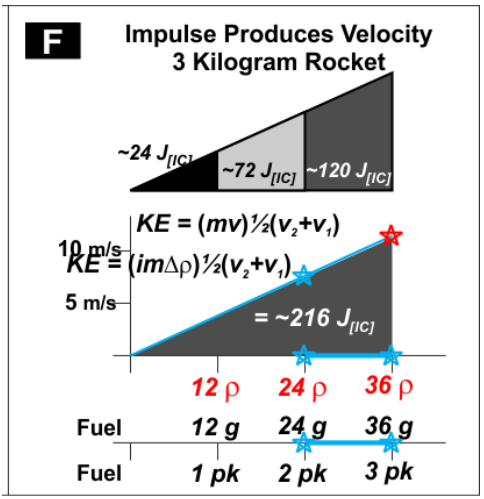
www.Wacky1301SCI.com, *"Looking at serious science, sideways!"*

Three sisters, Pico, Hectii, and Tera, the "Space-sci Sherlocks," are traveling through the Asteroid Belt. They stop to explore asteroids, perform motion experiments, and deduce why speedy-impulse creates kinetic energy.
—Excerpted from *Murdered Energy Mysteries*, Part 1, Chapter 11, by Du-Ane Du, (Amazon, Kindle, ebook 2018, paperback 2021).

Dear Grandma Aaret,

We talked to Grandpa Proge today, it was wonderful of him to call. Grandpa showed us what multi-parabolic kinetic-joules$_{[IC]}$ are. It has something to do with a form of mathematics called integral calculus.

I didn't grasp all the calculus ideas, but he told us that it's related to finding the area below a data-line. He kept referring to graphs that had impulse on the X-axis, and velocity on the Y-axis, like these:



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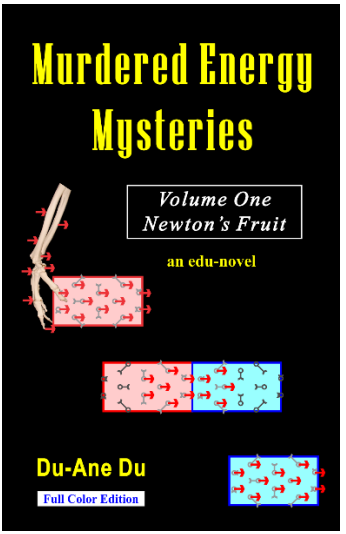

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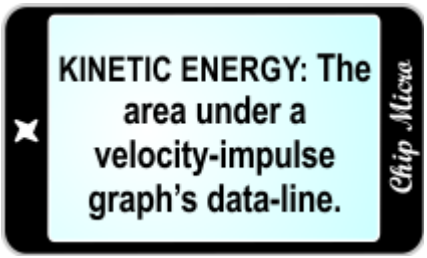
Grandpa Proge said, kinetic energy (energy-of-motion) was originally defined as the area below the velocity-impulse data-line, and the equation to calculate kinetic energy is based on the triangle equation which is *base*(½*height*). In the case of kinetic energy, or should I say kinetic speedy-impulse, the equation is $(mv)½(v_2 + v_1)$.



Aaach, little sisters are soooo annoying, now Pico is singing a new verse to her speedy-impulse song:

Give me impulse, Make it speedy,
I want speedy impul -l -l -l -l -l -lse,
'Cause that's what energy is—!

Fortunately, if I jam my earbuds in deep, and turn my music up, I can't hear Pico singing.

I still don't quite grasp how the kinetic speedy-impulse, or kinetic energy equation relates to the fuel that was burned when the rockets launched.

So, I going to do a hypothetical test. I'm going to pretend that I have ten packets of fuel in a 1.0 kg H-1 rocket. The engine will burn the fuel one packet at a time, and our previous experiments show that each packet will increase the rocket's velocity by 12 m/s. Ready?

1) The rocket engine burns the first packet. We know that our 1 kg, H-1 rocket always gains 12 m/s of velocity each time it burns one 12 g packet of fuel. That means the rocket

will go from 0 m/s to 12 m/s. The math for momentum and energy looks like this:

$$im\Delta\rho = mv_{final} - mv_{initial}$$

$$KE\ increase \cong mv\frac{1}{2}v_{final} - mv\frac{1}{2}v_{initial}$$

$$im\Delta\rho = (1\ kg)(12\frac{m}{s}) - (1\ kg)(0\frac{m}{s})$$

$$KE\ increase \cong (1)(12)\frac{1}{2}(12) - (1)(0)\frac{1}{2}(0)$$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 72 J[0.167] (joules)

2) The 1.0 kg rocket burns the second packet of fuel, and the velocity increases from 12 m/s to 24 m/s. (Remember, each fuel packet always causes the velocity to increase by 12 m/s.)

$$im\Delta\rho = (1\ kg)(24\frac{m}{s}) - (1\ kg)(12\frac{m}{s})$$

$$KE\ increase \cong (1)(24)\frac{1}{2}(24) - (1)(12)\frac{1}{2}(12)$$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 216 J[0.055]

3) The 1.0 kg rocket burns the third packet of fuel, and the velocity increases from 24 m/s to 36 m/s.

$$im\Delta\rho = (1\ kg)(36\frac{m}{s}) - (1\ kg)(24\frac{m}{s})$$

$$KE\ increase \cong (1)(36)\frac{1}{2}(36) - (1)(24)\frac{1}{2}(24)$$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 360 J[0.033]

4) The 1.0 kg rocket burns the fourth packet of fuel, and the velocity increases from 36 m/s to 48 m/s.

$im\Delta\rho = (1\ kg)(48\frac{m}{s}) - (1\ kg)(36\frac{m}{s})$

$KE\ increase \cong (1)(48)\frac{1}{2}(48) - (1)(36)\frac{1}{2}(36)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 504 J[0.024]

5) The 1.0 kg rocket burns the fifth packet of fuel, and the velocity increases from 48 m/s to 60 m/s.

$im\Delta\rho = (1\ kg)(60\frac{m}{s}) - (1\ kg)(48\frac{m}{s})$

$KE\ increase \cong (1)(60)\frac{1}{2}(60) - (1)(48)\frac{1}{2}(48)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 648 J[0.0185]

6) The 1.0 kg rocket burns the sixth packet of fuel, and the velocity increases from 60 m/s to 72 m/s.

$im\Delta\rho = (1\ kg)(72\frac{m}{s}) - (1\ kg)(60\frac{m}{s})$

$KE\ increase \cong (1)(72)\frac{1}{2}(72) - (1)(60)\frac{1}{2}(60)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 792 J[0.015]

7) The 1.0 kg rocket burns the seventh packet of fuel, and the velocity increases from 72 m/s to 84 m/s.

$im\Delta\rho = (1\ kg)(84\frac{m}{s}) - (1\ kg)(72\frac{m}{s})$

$KE\ increase \cong (1)(84)\frac{1}{2}(84) - (1)(72)\frac{1}{2}(72)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 936 J[0.0182]

8) The 1.0 kg rocket burns the eighth packet of fuel, and the velocity increases from 84 m/s to 96 m/s.

$im\Delta\rho = (1\ kg)(96\frac{m}{s}) - (1\ kg)(84\frac{m}{s})$

$KE\ increase \cong (1)(96)\frac{1}{2}(96) - (1)(84)\frac{1}{2}(84)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 1080 J[0.011]

9) The 1.0 kg rocket burns the ninth packet of fuel, and the velocity increases from 96 m/s to 108 m/s.

$im\Delta\rho = (1\ kg)(108\frac{m}{s}) - (1\ kg)(96\frac{m}{s})$

$KE\ increase \cong (1)(108)\frac{1}{2}(108) - (1)(96)\frac{1}{2}(96)$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 1224 J[0.0098]

10) The 1.0 kg rocket burns the tenth packet of fuel, and the velocity increases from 108 m/s to 120 m/s.

$$im\Delta\rho = (1\ kg)(120\frac{m}{s}) - (1\ kg)(108\frac{m}{s})$$

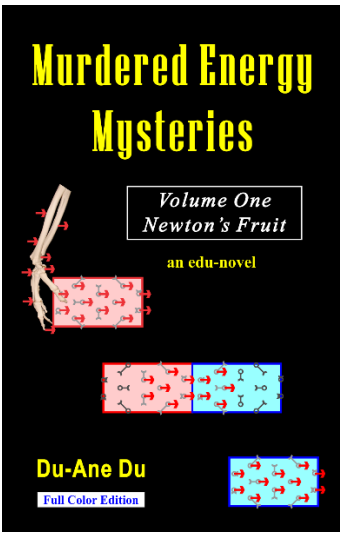
$$KE\ increase \cong (1)(120)\frac{1}{2}(120) - (1)(108)\frac{1}{2}(108)$$

1 packet of fuel produced:

im$\Delta\rho$ = 12 ρ

KE allegedly generated ≅ 1368 J[0.0088]

But what does it mean Grandma? There's no consistent relationship between the amount of fuel and the amount of energy, or speedy impulse, the fuel allegedly "creates".



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And that's where scientific philosophy becomes mythology. Grandpa Proge said, the kinetic energy equation was developed by a philosopher/historian named Gottfried Leibniz. Leibniz associated the kinetic equation with a philosophical idea he called

vis-visa. During his lifetime, virtually no one accepted his philosophical ideas.

And this new experiment definitively verifies that the idea of chemically stored kinetic-energy has been murdered.

If you remember, our #2 rule of pure science states, things that cannot be measured probably don't exist in the natural world.

Therefore, our new **kinetic fact #1 of improbable chemical/kinetic-energy** tells us, it's experimentally and mathematically impossible to determine how much chemical/kinetic-energy is allegedly "stored" in 1 gram of rocket fuel (joules/g). There's no exclusive mathematical correlation between the amount of rocket fuel burned, and the amount of kinetic energy, or kinetic speedy-impulse, that is "generated" by the fuel.

What cannot be measured, probably doesn't exist—therefore chemical/kinetic energy (chemical/kinetic speedy-impulse) is either a philosophical precept, or it's a component of a spiritual belief system. [In contrast, there is a relationship between the chemical bonds in fuel and standard linearized H&E-joules[1.2]—see *Murdered Energy Mysteries,* Part 3:.]

Hectii even proved this scientific improbability by developing an equation for the chemical/kinetic-energy produced/stored in fuel. It looks like this:

$$\boldsymbol{CKE_{[IC]} \cong k_{\rho/g}\,[grams\ fuel\ burned]\left(\frac{v_{final}+v_{initial}}{2}\right)}$$

$$\boldsymbol{CKE_{[IC]} \cong k_{\rho/g}\,[grams\ fuel\ burned](average\ velocity)}$$

See what I mean? If chemical/kinetic-energy is stored in fuel, then calculating it would only involve measuring grams of fuel. But to measure chemical/kinetic energy, you must also know the starting and ending velocities of the vehicle, or you must know its average speed. That's nuts! Laughably nuts!

Oh, by the way, the fact that these equations include average speed is part of why Pico keeps calling kinetic energy "speedy-impulse" or "speed infused impulse." I can still hear Pico singing:

Give me impulse, Make it speedy,
I want speedy impul -l -l -l -l -l -lse,
'Cause that's what energy is—!

If you are not convinced about the truthfulness our new **kinetic fact #1 of improbable chemical/kinetic-energy**, I can have my Chip Micro make a table of the results.

Here it is Grandma:

What a packet of fuel produces.			**I**
	Fuel used	Momentum transferred	Energy allegedly generated
1st burn	1 packet	12 ρ	72 $J_{[0.167]}$
2nd burn	1 packet	12 ρ	216 $J_{[0.055]}$

3rd burn	1 packet	12 ρ	360 J[0.033]
4th burn	1 packet	12 ρ	504 J[0.0238]
5th burn	1 packet	12 ρ	648 J[0.0185]
6th burn	1 packet	12 ρ	792 J[0.0152]
7th burn	1 packet	12 ρ	936 J[0.0128]
8th burn	1 packet	12 ρ	1080 J[0.0111]
9th burn	1 packet	12 ρ	1224 J[0.0098]
10th burn	1 packet	12 ρ	1368 J[0.0088]

See Grandma, there's no correlation between kinetic energy, chemical energy, and grams of fuel. Therefore, the idea of chemical/kinetic-energy or (chemical/kinetic speedy-impulse) must be some type of philosophical precept.

It looks like that chemical/kinetic-energy is our latest murdered myth. Does that mean all forms of *energia* are dead? If it is, what secrets does murdered *energia* hold? We have a lot more deductions to make!

But here's the amazing news, for weeks we've known that one packet of fuel *always* produces the same amount of impulse. Since *there is a definitive correlation* between fuel and impulse, we can draw one more super-definitive deduction.

We call this our **kinetic fact #2 of chemically bonded impulse.** This fact tells us, burning the chemicals in a given

brand of rocket fuel always produces a specific amount of impulse [momentum transfer] per gram (ρ/g).

The mathematical relationship between chemical impulse and grams of fuel is:

$$\boldsymbol{im\Delta\rho = k_{\rho/g}\ [grams\ of\ fuel]}$$

According to this equation, there *is* an exclusive correlation between the grams of fuel burned and the amount of impulse released by the fuel. Therefore, chemically bonded impulse *can* be measured based on grams of fuel.

Things that can be measured, exist in the natural world (Rule #1). Therefore prior to burning, the fuel must be storing the trapped-impulse in its chemical bonds. [Chemical bonds also store standard linearized H&E-joules[1.2]—see *Murdered Energy Mysteries*, Part 3:.]

During his call, Grandpa Proge said something about kinetic energy being a mathematical shortcut that is useful in some situations. I wonder why they decided to use mathematical shortcuts? Are mathematical shortcuts better than equations that relate to what nature is actually doing? Was the math so difficult that they had to use shortcuts? (Many more deductions to go!)

I guess I can't leave you with every answer today. Maybe someday soon I'll fully comprehend what's going on.

It's time for me to go.

Have a great day,
Your Tera.

CONCLUSION: More research needs to be done into the relationship between mechanical energy and other theoretical forms of energy. Many common beliefs may actually be philosophical myths.

Murdered Energy Mysteries seeks to increase understanding of the various forms of momentum and momentum transfer, as well as the various forms of energy and energy transfer. The lack of understanding on the part of the scientific community is substantial, and more research needs to be done.

—Du-Ane Du, author of the edu-novel *Murdered Energy Mysteries* (Amazon, Kindle, e-book 2018, paperback 2021.)

More information, see:
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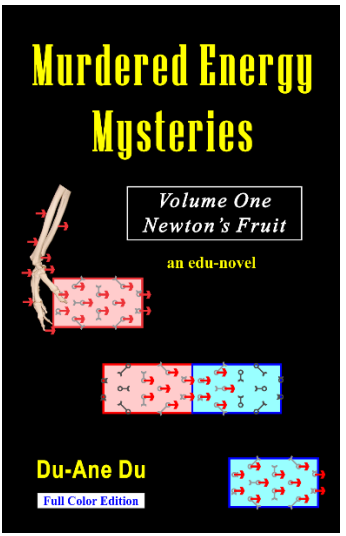

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