A CORRECT DEFINITION OF MASS Copyright 8 July 2015 By Glenn A. Baxter, P.E.

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ABSTRACT

Newton introduced the relation F = ma.   He never defined m or mass.   Dr. Einstein incorrectly used E = mc^2 or m = E/c^2 to define mass.   See www.k1man.com/c1   This paper correctly defines mass using Gravitrons.

Secondly, the purpose of this paper is to describe the two similar mechanisms of radio, light,. etc. generation and gravity generation, which have acceleration in common, as well as to correctly explain, for the first time, the connection between gravity, inertia, and ordinary acceleration.

ARGUMENT

Gravitrons are a fundamental quanta in nature.   See www.k1man.com/c55.pdf

ASSUME FOR THE MOMENT THAT GRAVITRON THEORY IS CORRECT

1. Motion of molecules becomes random per the second law of thermodynamics.
2. Heat radiation flows to the outside and away from a metal ball per the Second Law.

   o Thus the ball itself has a negative temperature gradient from its center.

3. Analogous is gravity radiation flowing toward the ball surface and then away from the ball.

   o Outside mass does "encourage" this, per Mach.

4. A Gravitron accelerating away from a source of Gravitron radiation will experience a force in the direction of the radiation source.   Similar to an electron accelerating away from a source of radio radiation.

5. An accelerating Gravitron will radiate gravity radiation in the direction of the acceleration. Similar to an accelerating electron radiating radio radiation in the direction of the acceleration.

6. To "null" inertia in the ball you need to uniformly orient some of the gravity radiation motions and accelerations in 180 degree opposite directions.

7. For propulsion you need orient and aim gravity radiation accelerations and therefore reception toward another mass in the direction of where you want to go.

8. Why does lazer light radiation go in a single direction and so straight?   You need a similar thing for gravity radiation.

9. Consider defining the standard aaa battery as a unit of mass.   Use voltage as a convenient measure of mass.   Thus 1.5 volts measured by a voltmeter measures a mass of 1.   Connect 10 batteries in series, measure 15 volts, and thus measure a mass of 10.   Now reverse odd battery polarities and now measure 0 volts and a measured mass of 0.

10. Now define F = ma "inertia" or m = F/a as a measure of mass.

11. Now, as suggested in (6) above, "null" out inertia mass to near zero.

12. Now F = ma or a = F/0 or near infinite acceleration.

13. With the battery definition of mass or the inertia definition of mass, have you really reduced mass to zero?   Of course not.

14. What is the kinetic energy of almost infinitely accelerated mass having almost zero nulled out inertia?   K.E. = ½ mv^2 or ½ (0) v^2 = very low.   Thus you cannot totally null out inertia since conservation of energy requires there to always be kinetic energy equal to the energy put in.

15. Therefore F = ma and Dr. Einstein's E = mc^2 or m = E/c^2 are bad or incorrect ways to define mass.

THE PROPER DEFINITION OF MASS

The author defines mass as the scalar number of Gravitrons present in a sample.

ANALYSIS OF FORCES

A Gravitron accelerating away from a source of Gravitron radiation will experience a force in the direction of the radiation source.   Similar to an electron accelerating away from a source of radio radiation.

An accelerating Gravitron will radiate gravity radiation in the direction of the acceleration.   Similar to an accelerating electron radiating radio radiation in the direction of the gravity radiation.

All mass in the universe radiates Gravitron radiation toward you from all directions, and when received by a Gravitron inside you that is accelerating toward the radiation source, there is a force on that Gravitron inside you in the direction of the radiation source.

A metal ball receives these forces equally from all directions.   If you push the ball in a specified direction, it will accelerate away from some Gravitron radiation source elsewhere in the universe and therefore experience a force in the direction of that particular radiation source.

The radiation received by Gravitrons (in the ball) must already be connected to the sources of that radiation by fields that were previously caused by Gravitron radiation.

This is the Mach idea that all mass in the universe is influenced by all other mass in the universe.

A metal ball at non zero temperature will always radiate gravity from its constituent Gravitrons making up the ball.

SIMPLE ACCELERATION AND INERTIA

The back of an accelerating airplane seat exerting a force on me feels exactly like gravity pulling me into the seat.

That force on my back causes me to accelerate in the forward direction.   That forward force will accelerate me away from some Gravitron radiation source elsewhere in the universe in the direction of the rear of the plane, and I will therefore experience a force in the direction of that particular radiation source.   That is inertia which closely resembles ordinary gravity.

A metal ball receives gravity radiation from all directions.   If you push the ball in a specified direction it will accelerate away from some Gravitron radiation source elsewhere in the universe and therefore experience a force in the direction of that particular radiation source.   Again, that is inertia.

In you orient Gravitron accelerations so that some are in one direction and an equal number are in opposite directions, you will "null" out inertia.

This would allow near instantaneous accelerations, high speed right angle turns, etc.

Orienting molecule (made of Gravitrons) movement to uniform directions for their accelerations would involve "tuning in" to the electric nature of molecules.   Controlling the uniformity of molecule motion is controlling the directivity of both gravity radiation and gravity reception.

NATURE OF GRAVITRON RADIATION

Gravitron radiation is similar to radio, light, etc. radiation except it is generated by accelerating a Gravitron mass rather that accelerating a charged mass, such as an electron generating radio radiation.

The Gravitron radiation, once received by another Gravitron, becomes attached to it by what is now the gravitational field, similar to an electrostatic field between two charged particles.   Exactly how an accelerating electron can generate radio radiation or how an accelerating Gravitron mass can generate gravity radiation is not yet know.

A PRACTICAL EXAMPLE

A Gravitron accelerating away from a source of Gravitron radiation will experience a force in the direction of the radiation source.   Similar to an electron accelerating away from a source of radio radiation.

An accelerating Gravitron will radiate gravity radiation in the direction of the acceleration.   Similar to an accelerating electron radiating radio radiation in the direction of the acceleration.

A person on top of a rocket receives Gravitron radiation from the earth which exerts a force downward on his gravitrons.   Earth's gravity makes him feel like he is accelerating up.

When the rocket takes off, he feels like he is accelerating away from the radiation source even more and thus experiencing even more force in the direction of the earth's Gravitron radiation.

A deep space rocket has equal outgoing and ability to receive incoming radiation from the back as it does from the front.   In an accelerating deep space rocket, Its Gravitrons feel an imbalanced force toward the back in the direction it is receiving Gravitrons from the universe, in that direction, which is felt as inertia and also as gravity pulling from the back.   Thus inertia and gravity feel like the same thing.

By changing the polarity of the Gravitron motions on the rocket, you change the direction of Gravitron accelerations and their ability to receive radiation from that direction and thus the rocket's inertia.

Without other masses throughout the universe, there would be no inertia.

SUMMARY

We have, for the first time, properly defined mass.   A mass quanta of 1 is the mass of a Gravitron.

Secondly, the purpose of this paper is to describe the two similar mechanisms of radio, light,. etc. generation and gravity generation, which have acceleration in common, as well as to correctly explain, for the first time, the connection between gravity, inertia, and ordinary acceleration.

Mr. Baxter has a degree in Industrial Engineering from the University of Rhode Island and is a Licensed Professional Engineer in Illinois and Maine.   He is a graduate of Vermont Academy, which honored him in 1993 as a Distinguished Alumnus with the Dr. Florence R. Sabin Award. It was at Vermont Academy as a student where Mr. Baxter attended a talk and met the very popular relativity author James A. Coleman[3].   Mr. Baxter has been doing research in relativity and physics ever since and is currently Executive Director of the Belgrade Lakes Institute for Advanced Research.   His current interests include physics, philosophy, and theology.

Glenn A. Baxter, P.E., at his home in Belgrade Lakes, Maine   U.S.A.

Glenn A. Baxter, P.E., age 4, with his dad, Frank H. Baxter (Bachelor of Science Degree, Mechanical Engineering, 1914, Rhode Island State College), and President of Frank H. Baxter Associates, 370 Lexington Avenue, New York City. See www.k1man.com/fhb and also www.k1man.com/w10 and www.k1man.com/Loons