

## ABSTRACT

Inertia of a mass sample directly depends on all the gravity radiation received by that sample from everywhere in the universe. Acceleration away from each gravity radiation source increases the gravity radiation received by any mass sample. Acceleration of the mass sample in the direction away from any gravity radiation source will add further to the strength of the gravity radiation received by the mass sample. This is the direct connection between mass generated gravity and artificial acceleration generated gravity whether linear or centrifugal. Mach's vague principle is clearly explained in this paper as well as the causes of inertia.

## ASSUMPTIONS

1. Light, radio, etc., is radiation, and gravity is also another kind of radiation. Both are disturbances that can travel as a wave through the void and deliver forces (without an increase in entropy) from the sources to where those forces are received.
2. There is no physical medium necessary for any radiation to travel through the void.
3. Light, radio, etc., is generated and received when electrons accelerate, and gravity is generated and received when the smallest particles of mass possible, Gravitrons, accelerate.
4. Mass is defined as tiny fraction of a kilogram, in the order of  $10^{-27}$ , known as a Gravitron.
5.  $F = ma$  or  $m = F/a$  is not a definition of mass since  $m$  is a variable which can be changed by nulling out inertia.
6.  $E = mc^2$  or  $m = E/c^2$  is not a proper definition or representation of mass.
7. Mass is a constant and cannot be directly changed into energy or vice versa.
8. The fundamental quanta of mass is the tiny Gravitron, which is the smallest possible mass, surrounded by a field without charge.
9. All mass must be elastic to conform with the second law of thermodynamics.

## ARGUMENT

It does not matter here if the universe is finite or infinite. Both light and gravity are radiations through the void, both of which are generated by acceleration. Light radiation is generated when electrons accelerate, and gravity radiation is generated when the smallest mass particles called Gravitrons accelerate.

Both light and gravity radiation can come from both close and also from very far away. Light certainly travels the entire distance to our eyes from each visible star, galaxy, etc.. In either a finite or an infinite universe, there are certainly more stars than the large number that we call visible. We are only interested right now in the stars that we characterize as being visible. Same idea with all mass in the universe which is made up of tiny Gravitrons, each being the smallest possible mass. This "smallest" stature is deduced from the postulate that a Gravitron cannot be sliced in half without separating it from its without - charge surrounding field, always surrounding the Gravitron, and giving

all Gravotrons the elasticity required by the postulate that all mass must be elastic, in conformance with the second law of thermodynamics.

So, I see the light from all the visible stars and feel a tug of gravity from many (not all and certainly not an infinite number of) Gravitrons.

I am at the center of this experiment of seeing visible stars and feeling the tug of gravity from gravity radiation coming from many Gravitrons in the universe in all directions.

Feeling the tug from many Gravitrons around the universe is the fundamental Mach idea, however Mach was quite vague and talked about his incomplete ideas of centrifugal forces and how that relates to what we call inertia. I say "many" Gravitrons to get away from the non relevant idea in this paper of "many" versus "infinite." I could never feel gravity radiation from infinitely far away anyway, so it is not relevant to discuss infinity here. Nor could I see light not included in the visible universe.

Electrons radiate light, radio, etc., when accelerated. With a similar mechanism, Gravitrons radiate gravity when accelerated. Electrons must be accelerating in order to receive light, radio, etc., radiation. Same idea for Gravitrons.

Gravitrons accelerating in the due North direction radiate gravity strongest in the due North direction. Gravitrons receive gravity radiation strongest when accelerating away from a gravity radiation source.

An object that is not accelerating receives gravity radiation from the universe equally strongly from all directions. The net tug on you of gravity coming from all around the universe is approximately zero.

Sitting in the seat of an airplane taking off in the due North direction adds the acceleration of the plane to the acceleration of each Gravitron in your body that happens to also be accelerating in the due North direction, and thus the net tug of gravity from the universe behind the plane will be stronger than a net zero tug and is felt as pulling you into the back of your seat; we call this inertia.

When that same Gravitron happens to be accelerating in the due South direction, its acceleration is subtracted from the Plane's due North acceleration, for a net due South acceleration less than when the plane was not taking off. Again, the net pull of gravity from behind the plane is stronger than when the plane was not taking off.

#### **NULLING OUT INERTIA**

By using a laser type ruby in which the Gravitron oscillations are mostly in the same directions and also phase, physically moving one side of the ruby  $\frac{1}{2}$  a gravity wavelength closer to the source of gravity radiation (coming from due South, for example,) will null out the gravity tug in that direction and thus null out inertia in that direction. The net gravity tug will now be due North, and with reduced or close to zero inertia in the reverse direction, your acceleration in the due North direction would be nearly infinite, per  $F = ma$ , or  $a = F/0 =$  nearly infinite.

As you accelerate due North, you would need to continuously adjust the average phases of gravity reception from the South in order to keep the inertia nulled out.

## CONCLUSION

Inertia would not exist without gravity radiation being received from all over the universe by a mass sample which will exhibit the property that we usually call inertia.

Gravity, inertia, and acceleration, either linear or circular (centrifugal force), are directly related.

[1] UNIFIED FIELD THEORY FOUND By Glenn A. Baxter, P.E. [www.k1man.com/c55.pdf](http://www.k1man.com/c55.pdf)

[2] A CORRECT DEFINITION OF MASS By Glenn A. Baxter, P.E. [www.k1man.com/c56.pdf](http://www.k1man.com/c56.pdf)

[3] FISSION AND FUSION ENERGY SOURCES By Glenn A. Baxter, P.E. [www.k1man.com/c59.pdf](http://www.k1man.com/c59.pdf)

## ADDITIONAL INFORMATION

[www.k1man.com/Info3.pdf](http://www.k1man.com/Info3.pdf)

*"To kill an error is as good a service, and sometimes even better than, establishing a new truth or fact."*

*Charles Darwin*

"Great causes are never tried on the merits; but the cause is reduced to particulars to suit the size of the partisans, and the contention is ever hottest on minor matters." - Ralph Waldo Emerson - From his essay "Nature" 1844

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. 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](http://www.k1man.com/fhb) and also [www.k1man.com/w10](http://www.k1man.com/w10) and [www.k1man.com/Loons](http://www.k1man.com/Loons)

