Theory of Gravitational Energy and Its Utility

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Research Article

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ABSTRACT

Gravitational, Electrical and Magnetic energy are one and the same and ultimate energy is the heat energy.

INTRODUCTION

It is amazing how all the particles in earth's surface co-exist. A particle on earth's surface consists of metallic and non-metallic elements in minute form. Our earth is quite rich in Iron, copper etc. Metals are perfect conductors. Non-metals are insulators. If the temperature of an insulator is increased, then it also acts as conductors to some extent. Finally if one end of a metal is kept hot and other cold, then emf is produced in it. Thus the temperature difference causes electrons to flow through metals and non-metals. This is how thermal noise is generated [1].

Creation of Gravitational Force

Now our earth consists of various layers having different temperatures. Consider that part of the earth which is very hot i.e. hottest. This part of the earth radiates heat in all directions. Consider an earth layer which is very near to the hotter part of the earth. This layer consists of particles of metals and non-metals.

There are three cases which arise due to orientation of particles in the above layer of Earth:-

CASE I: There are particles which so placed that electrons flow through them in horizontal direction. Thus magnetic field produced is in perpendicular direction to the flow of electrons i.e. Magnetic Field is produced in vertical direction (i.e. along Y-axis in Cartesian Co-ordinate system). Thus by Fleming's Left hand rule, magnetic force will be created in downward direction.

CASE II: There are particles which are so placed that electrons flow through them in vertical direction (i.e. Y-axis). Hence magnetic field is produced in horizontal direction (i.e. along X-axis in Cartesian Co-ordinate System). The magnetic force will be produced in direction perpendicular to direction of Magnetic field, in the same plane as that of magnetic field [2,3].

CASE III: There may be particles which make an angle θ with the horizontal plane of the earth layer. The magnetic field will be produced in direction perpendicular to the direction of orientation of the particle. Hence there shall be two components produced i.e. B Cos θ and B Sin θ where B is the magnetic flux density of the particle and θ is the inclination of the particle with that of the plane in which the layer is situated. Then vertical component of magnetic field that adds up in vertical direction is B Sin θ and horizontal component of magnetic field that adds up in the horizontal direction is B Cos θ. Here again resultant magnetic force is produced as given by Fleming's Left hand rule i.e. Along Z-axis due to B Sin θ and along Y-axis due to B Cos θ [4].

Combined Effect of Creation of Force in All Layers of the Earth

Similarly, consider the other layers just above it. Similar phenomena will take place there. Due to heat energy, magnetic field

will be created in vertical or horizontal or radial direction due to specific orientation of the respective particles in any existing layer of the Earth. Due to magnetic field in radial, vertical or horizontal direction, magnetic force would be similarly produced having vertical and horizontal components.

It is submitted that the magnetic field produced in perpendicular direction (Y-axis in space) by so many particles in different layers will combine with each other and have the resultant effect in respective perpendicular direction. This resultant magnetic field will have magnetic force acting in direction perpendicular to the direction of magnetic field as defined by Fleming's Left hand rule [5].

Similarly, magnetic field produced in horizontal direction will inter-link with magnetic field produced in the same direction by particles in the same layer. This resultant magnetic field will have attraction towards the similar magnetic field produced by other layers above it and thus it continues. Thus there will be resultant magnetic field of earth in horizontal direction producing resultant force along direction of z-axis.

Now particle placed at an angle θ with layer's plane will have its magnetic field added to that of similar particle, placed in similar fashion in the layer above it. Thus again resultant magnetic field will be produced in radial direction leading to the creation of magnetic force in two perpendicular components. Thus depending upon placement of particles in a layer and layers above it, magnetic field is produced in all directions assisting each other and not cancelling each other. It is so because magnetic field produced by inclined particles have effect of B Cos θ added in horizontal direction and B Sin θ added in vertical direction.

Thus, the resultant field on earth's surface at any point in any direction results in creation of magnetic force as given by Fleming's Left hand rule at said point in given direction. This magnetic force is gravitational force that one experiences on earth. Thus heat energy is responsible for creation of magnetic field leading to generation of magnetic force which is nothing but gravitational force experienced alike, by all the living beings and non-living beings on the surface of the earth **(Figure 1)**.

Mathematical Analysis

Following mathematical analysis gives an idea of magnitude of magnetic force.

We have seen that depending upon how particles are placed; magnetic field is created around them. If in one layer, say, there are n particles.

Let n particles make n angles such as θ1, θ2,..., θn with the plane of layer in which these particles are situated.
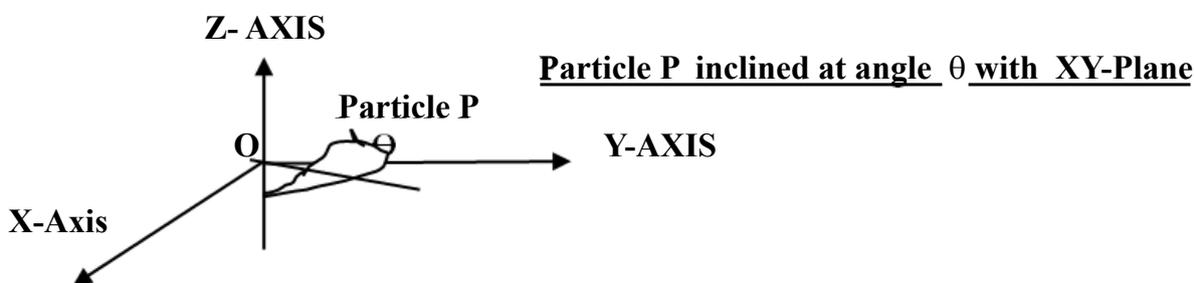

Figure 1. Magnified particle p inclined at angle θ with XY-plane.

In Cartesian Co-ordinate system, let X-axis represent flow of electrons, then Y-axis represents Magnetic field produced by electron flow and Z-axis represents magnetic force.

The resultant magnetic field in horizontal direction is:

Bx=(B1 Cos θ1) + (B2 Cos θ2) + ...+ (Bn Cos θn)   (1)

Further, magnetic field in vertical direction is-

By=(B1 Sin θ1) + (B2 Sin θ2) + ...+ (Bn Sin θn)   (2)

Resultant magnetic field produced by one layer is —

$$B = \sqrt{\left(B_x\right)^2 + \left(B_y\right)^2}$$ (3)

Now magnetic force produced by one layer is –

F=BI1L + BI2L + BI3L +..................... + BInL

Where I1, I2, I3,.........In are the currents flowing through n particles. Since particles are considered of uniform size I=I1=I2=I3=In.

Hence F=nBIL (Where L is the length of particle and B is magnetic flux density.

Considering that there are no such layers with particles of uniform Length L, total magnetic force is given by

$$F_s = L \left(\sum_{i=1}^{i=n} B_i I_i n_i \right)$$

Note that all layers could not be considered of same size. Thus one could imagine how large this magnetic force really is. This magnetic force is the gravitational force exerted by earth upon us.

Existence of Natural Phenomenon

There are many natural phenomena supporting the above theory such as creation of deserts, flow of river and others. One of the said phenomena is explained as hereunder.

Flow of Water in River

At the river bed, there exists cohesive force between particles. This cohesive force is the magnetic force existing between particles situated at the river bed. In any layer of earth, when EMF is induced due to temperature difference, magnetic field is produced, as explained before. Hence magnetic force is produced along Y-axis as well as Z-axis.

Now consider the bottom layer of river. Magnetic force of earth which acts in vertically downward direction pulls the water droplets in downward direction. Magnetic force that is acting along Y-axis gives a horizontal motion to the water droplets at the bottom layer. Thus once the motion starts, body is always in motion unless it is stopped externally. This is Newton's first law of motion. However this layer is resisted by second layer just above it. However due to combined force of particles and bottom layer, sufficient force is provided to second layer and it starts flowing too. Similarly, other layers above them start flowing. Wind further assists them in flowing continuously.

Gravitational Nucleus Energy

Consider nucleus of an atom. It contains heat energy due to motion of charges such as mesons etc. in it. This heat energy further increases the motion of charges. However due to this motion, magnetic field perpendicular to direction of motion of charges is produced. This magnetic field produced magnetic force which pulls the electrons towards itself. However this magnetic force due to magnetic energy varies as the distance of the electrons from the nucleus. Hence electrons maintain a fixed distance from the nucleus. This is gravitational nucleus energy similar to the gravitational energy produced by the earth.

Let gn be this gravitational acceleration of nucleus of the atom and Ma be the actual mass of atom. Then, when we find mass of an atom, what we get is "M" and not "Ma", where

M=g_n Ma

Thus really speaking, we take weight of an atom considering gravitational acceleration of nucleus. Now during fission, energy gets released, resulting in decease in value of mass. This really means that gravitational nucleus energy has been decreased due to fission and since it lessens, attraction decreases and low value of mass compared to desired mass is obtained. Thus mass and energy are not convertible. It appears that fission leads to conversion of mass into energy but it is not so.

CONCLUSION

I would like to conclude by saying that ultimate energy is heat energy. Gravitational energy, electric and magnetic forces are just the effect of heat energy. Thus all the energies are one and the same. Thus it is proved that the heat energy which is considered as the waste energy is responsible for creation of greatest force that is known to mankind as Gravitational force. This theory also proves that earth is one of the greatest magnets in the universe. This theory also explains the reason of mass appearing to be converted into energy during process of fission. It is submitted in respect of the formula E=Mc^2 designed by Sir Einstein that it is not the mass that gets converted into energy but the loss of nucleus gravitational energy. It can be concluded that the difference between masses of the fissioning atoms before and after fission is actually the amount of the gravitational nucleus energy lost in process of fission.

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