



# INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact factor: 4.295

(Volume 5, Issue 2)

Available online at: [www.ijariit.com](http://www.ijariit.com)

## Dominating electrons, causes of earth's magnetic field

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### ABSTRACT

*The inner core of the earth is made of molten iron due to the extreme heat the electrons have been removed from their higher orbit and ionized. Ionization is the remove (or) escaping of electrons of the atoms from their orbit. The electrons thus ionized rising, flee towards the surface of the earth from south pole to the North pole distinctly paths on the Earth's surface and stirs the electrons in the higher orbit of the atoms of Soiled, Oceans and atmosphere causing a great magnetic field. Those stirred electrons which cause the magnetic field are called Dominating Electrons.*

**Keywords**— Ionization, Stirred electrons

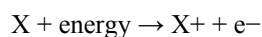
### 1. INTRODUCTION

“Earth formed around 4.54 billion years ago, approximately one-third the age of the universe, by accretion from the solar nebula. Earth was born out of nebula and was in extreme heat that is a very high temperature. The hot molten state of the Earth gradually cooled when temperature lowered after many millions of years. The features of the earth have also changed, causing the formation of a solid crust, and allowing liquid water on the surface. The history of concerns the development of planet Earth from its formation to the present day. But the inner core of the earth is boiling with high temperature and is in the molten metallic state. The outer core of the Earth, about two-thirds of the way to the center, is molten iron. Deeper yet, at the inner core, the pressure is so great--3.5 million times pressure – that iron solidifies, even though the temperature is believed to exceed 11,000 degrees Fahrenheit, hotter than the surface of the sun. The inner core of the earth is made of molten iron. Due to the extreme heat, the electrons have been removed from their higher orbit and ionized.

### 2. IONIZATION AND ENDOTHERMIC PROCESS

#### 2.1 Ionization energy

Ionization energy is the escaping of electrons of atoms from their orbit. The ionization energy (IE) is qualitatively defined as the amount of energy required to remove the most loosely bound electron, the valence electron, of an isolated gaseous atom to form action. It is quantitatively expressed in symbols as:



Where X is an atom or molecule capable of being ionized, X<sup>+</sup> is that atom or molecule with an electron removed, and e<sup>-</sup> is the removed electron. This is an endothermic process.

#### 2.2 Endothermic process

The endothermic process of Energy is needed to keep the dynamo running. This energy comes from the release of heat from the surface of the solid inner core. Although it may seem counterintuitive, material from the liquid outer core slowly "freezes" onto the inner core, releasing heat as it does so. (High pressures within the Earth cause material to freeze at high temperatures.) This heat drives convection cells within the liquid core, which keeps the liquid metal moving through the magnetic field.

The Earth's magnetic field is believed to be generated by electric currents deep down in the Earth's core conductive iron alloys of its core, created by convection currents due to heat escaping from the core.

### 3. CONCLUSION

The Earth behaves like a magnet because the Earth is a magnet. It is not a permanent magnet, but an electromagnet. We now understand why. Deep in the Earth, molten metal (mostly iron) flows due to heat which causes convection. Moving point charges, such as electrons, produce complicated but well known magnetic fields that depend on the charge, velocity, and acceleration of the

particles. Magnetic field lines form in concentric circles around a cylindrical current-carrying conductor, such as a long chain reaction. The electrons thus ionized rising, flee towards the surface of the earth from South pole to the North pole distinctly paths on the Earth's surface and stirs the electrons in the higher orbit of the atoms of Soiled, Oceans and atmosphere causing a great magnetic field. Those stirred electrons which cause the magnetic field are called Dominating Electrons.