How does Geomagnetic Field form

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Abstract

Geomagnetic field is important to every life, forming of which has not been explained well. This paper linked lodestone on earth and distance from earth to sun to explain forming of the geomagnetic field. Finally found that key to forming the geomagnetic field is distance from earth to sun. Affected by this distance, the matter earth gets from sun is special magnetic energy particles, which promotes to form lodestone, magnetic energy from which is stored in lodestone. Much lodestone on earth makes up a huge magnet, which release unified magnetic energy to make up the geomagnetic field.

Text

The geomagnetic field is important to us on earth. In solar system, earth is the only planet with strong magnetic field, which is different from other planets. How does the Geomagnetic Field form? Where does the magnetic energy come from? They are bothering us. Most explains are built on electromagnetic theory, but it is difficult to find evidence on earth. This paper will study these problems with energy wave.

Earth has strong geomagnetic field. The natural magnetic matter is lodestone, which widely exists on earth. It is not accidental that much lodestone is existing on earth. Lodestone is the key of studying the form of geomagnetic field.

Lodestone is a crystal, chemical component of which is "Fe_3O_4". Lodestone has magnetism at indoor temperature. When it is heated to make its temperature exceed Curie point, it will suddenly lose its magnetism. The Curie point of lodestone is 770℃. We know that high temperature makes the crystal structure of lodestone change. Thus we can decide as follow: Magnetism of lodestone is related to the crystal structure, not to its chemical elements.

According to the standard PDF#19-0629 for X diffraction analysis, the strongest line of lodestone is at 0.25320nm, which matches the planes (3 1 1). It means that these planes have the largest quantity, interplanar spacing of which is "d =0.25320nm". Storing and transferring magnetic energy matter should be related to these planes.

We know that temperature in the center of earth is very high, the lodestone cannot have magnetism at the high temperature. So the energy of geomagnetic field should come from outside the earth. Most energy in the solar system comes from the sun. The earth has strong magnetic field to be different from other planets. The main difference of them are different distances from sun.

NASA published an article "Magnetic Portals Connect Sun And Earth" on Science Today at November 2 / 2008, which tells a discovery as follow: A magnetic portal opens approximately every eight minutes, linking Earth to the sun 93 million miles away. The time it takes for light to move from sun to earth is approximately 8 minutes. We can decide as follow: Sun always sends an energy wave to earth, wavelength of which is equal to the distance from sun to earth, which carries many magnetic energy matter periodically from sun to earth. The geomagnetic field is related to the distance from sun to earth.

At present, the average distance from sun to earth is "D =149597870691m", the interplanar spacing of the lodestone is only "d=0.25320nm". To make the two lengths with great disparity to interact together, we need to introduce a theory. According to the paper "Uncover the logic of Fine Structure constant", the energy wave "λ" can transfer its energy to the energy wave "$2^n\lambda$" or "$\lambda/2^n$" as follow:

$$\lambda \Leftrightarrow 2^n\lambda \quad \text{or} \quad \lambda \Leftrightarrow \frac{\lambda}{2^n} \tag{1}$$

Look "D" and "d" as the wavelengths of two wave, and comparing them, we can get as follow:

$$\frac{D}{d} = \frac{149597870691\text{m}}{0.2532\text{nm}} \approx 2^{69} \tag{2}$$

At present, the distance from sun to earth is 1.4710×10^8 ~1.5210×10^8 km, which will be 0.249197nm~0.257667nm after converted to similar grade of "d=0.25320nm". "d=0.25320nm" is just in the middle of this range with swings -1.58%~+1.76%.

By studying the above data, we can explain the form of the geomagnetic field as follow：

When earth revolves around Sun, the distance "D" from sun to earth form an energy wave from sun to earth, the wavelength "λ_1" of which is equal to the distance "D".

$$\lambda_1 = D \tag{3}$$

Under the principle of energy transfer as the equation "$\lambda \Leftrightarrow \lambda/2^n$", the wave "$\lambda_1$" attracts many magnetic energy particles with the wavelength "$\lambda_2 \approx \lambda_1/2^i$", and carries them to earth periodically.

$$\lambda_2 \approx \frac{\lambda_1}{2^i} = \frac{D}{2^i} \tag{4}$$

Under acting by these magnetic energy particles, crystal "lodestone" is formed on earth, the interplanar spacing of which is associated with the wavelength "λ_2" of these magnetic energy particles. High energy is easy to turn to lower energy, so "$d > \lambda_2$". Under the principle of energy transfer as the equation "$\lambda \Leftrightarrow 2^n\lambda$", we can get as follow:

$$d \approx \lambda_2 \times 2^j \approx \frac{D}{2^{i-j}} = \frac{D}{2^{69}} \quad (5)$$

Under acting by these magnetic energy particles from sun, magnetite crystal will form at the direct point of the sun at first, then grow toward both sides. All magnetite on the earth forms a huge magnet, which stores the magnetic energy from these magnetic energy particles and releases unified magnetic energy to make up the geomagnetic field.

Methods

1. An energy wave connect sun and earth, which wavelength is the distance from sun to earth.

Science News "Magnetic Portals Connect Sun And Earth" reported as follow:

On the dayside of Earth (the side closest to the sun), Earth's magnetic field presses against the sun's magnetic field. Approximately every eight minutes, the two fields briefly merge or "reconnect," forming a portal through which particles can flow. The portal takes the form of a magnetic cylinder about as wide as Earth.

All tells us as follow: An energy wave connects sun and earth, which wavelength is the distance from sun to earth. It carries the magnetic energy to earth periodically.

2. **Energy wave "λ" can transfer its energy to the energy wave "$2^n\lambda$" or "$\lambda/2^n$"**

The paper "Uncover the logic of Fine Structure constant" believed as follow:

Everything has its own energy spiral as following equation, which are same in graph.

$$\lambda(\theta) = \lambda_0 2^{\frac{\theta}{2\pi}} \quad (6)$$

Everything can be unified with energy spirals. Any energy wave "λ" can match the wavelength "λ" on any energy spiral, and make the point of wavelength "λ" resonate. The resonation will transmit the energy along the wavelength "λ" on the energy spiral to meet some need of energy. According the equation (6) of energy spiral, energy wave "λ" can transfer its energy to the energy wave "2^nλ" or "λ/2^n" as follow:

$$\lambda \Leftrightarrow 2^n\lambda \quad \text{or} \quad \lambda \Leftrightarrow \frac{\lambda}{2^n} \tag{7}$$

References

1. Magnetic Portals Connect Sun And Earth, NASA, www.sciencedaily.com, November 2, 2008
2. PDF#19-0629: Magnetite, X diffraction analysis
3. Uncover the logic of Fine Structure constant, JianFei Chen, http://viXra.org/abs/1905.0425