

New discovery of current, magnetic field and electromagnetic radiation in electrostatic phenomenon

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Abstract: We have always believed that stationary charges generate an electrostatic field. A moving charge generates a current and a magnetic field. A changing magnetic field produces electromagnetic radiation. Frictional electrification is the generation of electrostatic charge and an electrostatic field through friction. The charge does not move. It has no current, magnetic field and Electromagnetic radiation. However, in the latest experiments we found that a rubbed ruler can cause small magnetic needle deflection and electromagnetic radiation. This shows that the rubbed ruler can produce current, magnetic field and electromagnetic radiation. This can lead us to rethink traditional electrostatics.

Keywords: electrostatic; current; magnetic field; electromagnetic radiation

introduction:

References Study on Internal Mechanisms of Charge, Current, Electric Field and Magnetic Field [1]. This paper predicts that the friction rule can generate a magnetic field and gives experimental verification. So I designed an experiment today to verify the conjecture of this paper. The experimental equipment, procedures, methods, and conclusions are now published here.

1: The experimental process

Purpose of the experiment: Verify that the rubbed ruler has a magnetic field.

experiment analysis:

According to the traditional theory of electromagnetism, a stationary charge generates an electrostatic field, and a moving charge can generate current and magnetic field. A changing magnetic field can generate electromagnetic radiation. In addition, a rubbed ruler attracts shredded paper is an electrostatic phenomenon, which is not caused by static electricity. With the charge of motion, there is no current, magnetic field, and electromagnetic radiation.

So, if I can measure the presence of any current, magnetic field, and electromagnetic radiation in an electrostatic experiment, I've verified the author's conjecture that the friction can generate a magnetic field in the reference. We need to modify the textbook; if the electrostatic experiment cannot Measuring the

presence of any object in the current, magnetic field, and electromagnetic radiation suggests that the author's conjecture was wrong.

Experimental equipment: ruler, shredded paper, electroscope, small magnetic needle, electromagnetic radiation measuring instrument.

Experimental steps:

Control experiment 1: I did not use a rubbing ruler and directly used a ruler to approach the shredded paper, electroscope, small magnetic needle, and electromagnetic radiation measuring instrument, respectively. We found that they did not respond to the ruler.

Control experiment 2: I first used a ruler to rub the hair, and then used a ruler to approach the shredded paper, electroscope, small magnetic needle, and magnetic field measuring instrument, respectively. In the experiment, I observed that the ruler can attract shredded paper scraps and respond to the electroscope. Unexpectedly, I also found that the ruler can induce small magnetic needle deflection and clearly measure the intensity of electromagnetic radiation (value range is $0 - 7510 \mu W / cm^2$).

Experimental conclusion: According to the above experiment, I measured that the friction ruler can induce small magnetic needle deflection and at the same time have electromagnetic radiation value, which shows that friction generates a magnetic field. Therefore, we verified the author's conjecture that friction generates magnetic fields.

In addition, because the moving charge generates a magnetic field, the existence of a magnetic field indicates that there is a moving charge, and the movement of the charge can generate a current, so we indirectly measure the existence of a current.

2: Summary

Through the above experiments, we found that there are currents, magnetic fields, and electromagnetic radiation in the electrostatic field. This means that the charge in the electrostatics is not static, so this can lead us to rethink the traditional electrostatics.

Acknowledgements: I have been single for 25 years. Please contact me if there is a girl who is interested in me. If I'm lucky, I can also use this paper to stand on the prize podium to propose to you.

References: Study on Internal Mechanisms of Charge, Current, Electric Field and Magnetic Field

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