Electrostatic field?... It's very simple!

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How easy it is to be cheated

You probably won't believe what I write here ... And rightly so, because you don't have to believe it. You have to think about this and include everything you learned about matter in school. And then, at some point the "knowledge will come" ... at some point the mind will "click" and you will understand that it is actually very simple.

Let me put it straight ... the mind of a man often deceives him and leads him astray. The simplest example is light. Due to the fact that there is light, we can see objects and the world around us. So we say: there is light. Yet, in fact, "light" is a visual impression, and it is in fact a psychic phenomenon that exists but exists in the consciousness of the observer. Someone who does not know the physics of light stimuli and the physiology of living organisms (if only in the field of receiving stimuli and experiencing sensory impressions), has only common knowledge. Yes, this knowledge can be useful, but it is not scientific knowledge.

Similarly, the human mind has been tricked into dealing with electrostatic charges that appear on objects electrified by friction. The case developed from quite superficial observations. It has been observed that small objects electrified in a similar way - for example, by the touch with a glass stick that was previously rubbed with silk - repel each other, and two small objects electrified in different ways - one by touching with a glass stick and the other by touching with silk - attract to each other. The electrostatic charges were assigned signs - plus and minus - and it can be said that from this began the existence of charges as self-contained entities.

Features in the form of unlike signs were given to electrons, protons and other elementary particles of matter. This gauge was used to ensure a consistent and logical interpretation and description of all discovered particles and phenomena in matter. The goal was glorious ... But it did not take into account that the very concept of electrostatic charge was and is arbitrary. It is also conventional to interpret the causes that cause the mutual movement of electrostatically charged objects.

Because what is observed, for example, in the form of small objects with charges that can be assigned similar characteristics moving away from each other, does not necessarily mean that these charges repel each other. By adopting this point of view and making an opinion about repulsion or attraction, we ignore the fact that we (in fact) attribute certain characteristics to living organisms to loads. We give loads the ability to distinguish the nature of the neighboring load and make decisions about whether to attract or repel it.

When signs were given to electrostatic charges and these signs were assigned to particles of matter as particular physical entities that make up atoms, it was done without knowing what the essence of matter particles was. There was no knowledge of what the nature of these particles was or what exactly electrostatic charges were.

The name "electron" was introduced to physics in the 1890s without any deep knowledge of what an electron really is. Neither the naming of the electron by G.J. Stoney (it is obvious that this is not the way

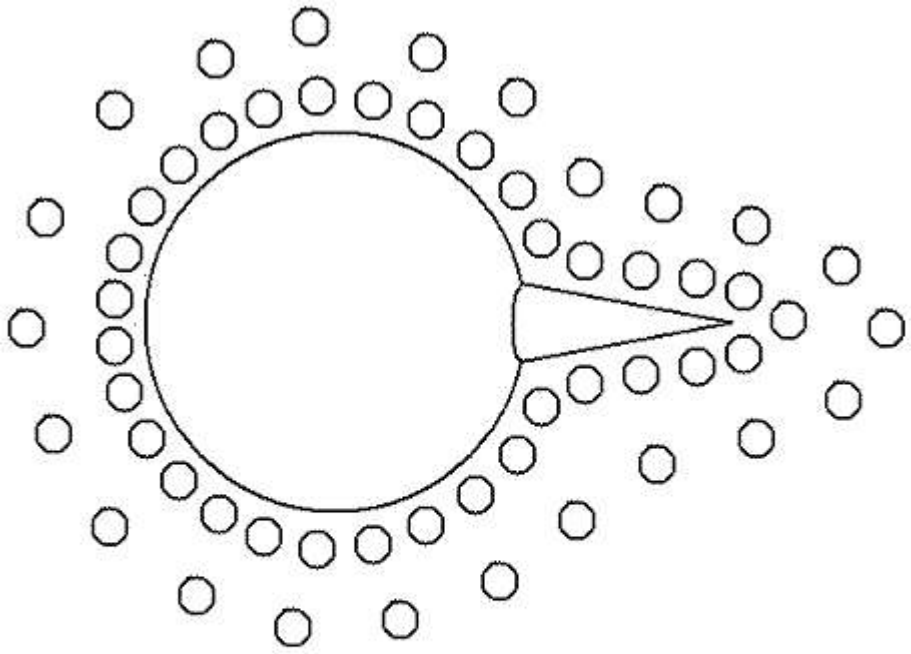
to know it) *), or the physical discoveries of J. J. Thomson and R.A. Millikan. As recently revealed, the latter was guilty of a scientific forgery. And he did so in order to be able to show, on the basis of the results of his physical experiences, that the electron is an individual physical object to which a specific electric charge and a specific mass can be assigned.

Millikan, summarizing the results of his experiments, used and presented only a third of the obtained results, and he hid the rest because they did not confirm his thesis about the electron. In the conducted experiments, there were 175 pieces of all drops. Millikan omitted the results of the tests, which concerned 117 drops, and provided information only about the results of the experiments, which concerned 58 drops. You can read about it at http://scienceweek.com/2004/rmps-27.htm (or at http://pinopa.narod.ru/Oszustwo_Millikana.html). It is possible that if Millikan had been an honest researcher, it would have been known long ago that an electron is not a unitary object - a particle, but a cloud that consists of a very large number of particles - protoelectrons, i.e. particles that exist before they form there are densities - electrons. (You can read about protoelectrons at http://pinopa.narod.ru/Magnet_pole_uk.pdf.)

Thus, because of the Millikan's deception, the knowledge of the electron is presented in today's physics, treating it as a specific individual object. And what Millikan hid from reaching the physicists is the fact that the electron cannot be assigned a unit negative electric charge. For the electron is in fact a cloud which is made up of many particles of matter. And it is precisely all the results of Millikan's experiments and the conclusions that could be drawn from them could be an indirect confirmation of this fact.

The law of the natural density distribution of matter

Electrostatic phenomena, the concepts of electrostatic field and charge, are related to the universal law that governs matter - it is the law of the natural density distribution of matter. The law of the natural distribution of the density of matter is as universal as the law of universal gravitation. These two laws are directly related to each other. Because the natural distribution of matter density is the result of the same acceleration (fundamental, gravitational) that causes some objects to move towards the other. The distribution of matter density in nature, which occurs in three example cases, is shown schematically in the figure below.



Schematic distribution of the concentration of electrostatic charges around an object in the shape of a sphere connected to a small cone, or the distribution of the concentration of the atmosphere around a celestial body (if such a body existed in nature), or the distribution of the concentration of protoelectrons around the center of the atom - you can imagine that there is more than one cone around the center of the atom but many different deformations due to the complex nature of the atom. The essence of the density distribution is that with increasing distance, the distribution density (charge, atmosphere, protoelectrons) decreases.

The course of electrostatic phenomena is related to the existence of two basic types of particles - centrally symmetrical fields - which are part of matter. These two different kinds of particles are, on the one hand, "inseparably" bound together, but on the other hand, to some extent, separate from each other. Bearing in mind that this is only a rough approximation, it can even be said that there are two types of matter. One type of matter is "heavy", atomic matter, consisting mainly of neutrons and protons, which we know very well and which we are made of. The second type of matter is "light" matter, consisting of protoelectrons, which exists in a physical vacuum. This approximation should be remembered because in atomic matter there is also a condensed protoelectron medium, which Millikan studied in the form of certain portions, which in physics are called electrons. Thus, atomic matter is in fact an "inseparable" connection with itself of "proton-neutron matter" with dense "protoelectron matter".

Ionization phenomenon - Equilibrium in the structure of the atom

The concept of an inseparable connection is used here in a conventional sense. Because, on the one hand, you cannot get rid of the connection of "proton-neutron matter" with dense "protoneutron matter" (by definitively separating them from each other) and obtain a matter that would consist only of protons and neutrons. On the other hand, atoms during rapid changes in their velocity, which occur as a result of collisions with other atoms (e.g. during friction of the surfaces of various substances), can lose some of their electrons. This process is called positive ionization. On the other hand, these released electrons (i.e. condensed protoelectron clouds), when they get stuck in the structure of other atoms, which were previously neutral and their structure was in the state of equilibrium, cause their negative ionization.

The ionization phenomenon is directly related to the violation of the structural equilibrium that existed in the atom before its ionization. This state of equilibrium consists in the fact that in the atom there is a stable system of neutrons and protons connected to each other and a highly concentrated medium consisting of the same particles - c.s. fields that exist all around the atom and in a physical vacuum in general. Maintaining the concentration of protoelectrons in the form of dense clouds - electrons in the area of each atom occurs constantly. This process of densification (to some degree of density, different for different places in the atom) is due to the physical nature of the protons and neutrons themselves - in particular, the distribution of the potentials of these particles contributes to it - c.s. fields, which causes the

protoelectrons to be constantly directed towards the central regions of these particles - the fields. By contrast, the existence of concentric potential shells in these c.s. fields contributes to the division of the protoelectron density existing in the atom into certain parts. These parts of the compact cloud are held in the region of the atom by potential shells in such a way that during collisions of the atom with other atoms they behave independently of other similar parts of the cloud. So during collisions, some parts of the density may not keep up with the changing motion of the atom and follow the current direction of motion, thus separating and leaving the atomic structure. The remaining parts of the cloud after the collision still exist in the structure of the atom, because they were more closely associated with protons and neutrons.

The collision, which led to the exclusion of one electron from the atomic structure, occurred due to an obstacle in the form of another atom, which was in the path of the atom's motion before it was ionized. Thus, a separating cloud - an electron during such a collision may forcefully fall into the area of the structure of the atom that was on the path of motion and may get stuck there, remaining for some time as a kind of surplus of condensed protoelectrons. Thus, during one collision of two electrostatically (electrically) neutral atoms, two ions are formed - a positive ion and a negative ion.

The existence of electrons in the structure of atoms is conditioned by two reasons. The first reason is that there is an appropriate potential distribution around the central points of the neutrons and protons. The second reason is the operation of the principle of minimizing the potentials of space (the SPM principle can be found at http://www.pinopa.narod.ru/ZasadaMPP_uk.pdf.) These reasons make the protoelectrons in atoms form densities that reach this state in which the atom as a whole is stable. Throwing at least one electron from an atom or attaching an additional electron to the structure violates this state of stability. As a result, there is a distribution of potentials in space that can be equated with matter striving to remove this state of imbalance when it occurs and return to its previous stable state of equilibrium. A kind of pressure of matter appears, during which atoms are deionized over time. During this process, protoelectrons fill the defect that has arisen in a positively ionized atom, and when protoelectrons create an excess in a negatively ionized atom, they are removed from this atom.

The illusory phenomena of attraction and repulsion

The process of returning atoms to a neutral state is related to the mutual movement of ionized atoms. The pressure of matter that exists during this process tends to distance the equally charged ions from each other. Regardless of whether they are positive or negative ions, the situation looks as if the deionization takes place as a result of the pressure of the protoneutron environment. In the case of negative ions, within and around them, there is an overpressure of the protoelectrons, and in this case the "excess" protoelectrons move away from these overpressure regions, as it were, push the negative ions away from each other. However, in the case of positive ions, there is a shortage of protoelectrons and the resulting negative pressure in relation to the medium around these ions. Protoelectrons, which travel to the regions of negative pressure to penetrate the ions and make them neutral atoms, move the ions away from each other. In both cases, the preservation of two identical ions or two uniformly electrified objects, or, for example, the leaves of a charged electroscope, is as if there was an pursuit aimed at facilitating the flow of protoelectrons (from ions to the outside and vice versa) over the largest possible surface area and shortening the time deionization.

The approach of dissimilar electrostatic charges to each other takes place as a result of a similar mechanism to the spreading of identical charges. But in this case, the zones of the lowest and highest pressure of protoelectrons are located in the area of adjacent opposing charges. The equalization of the pressure of protoelectrons and the return of ions to the state of neutral atoms takes place while bringing these ions closer to each other. Again, the ions behave as if they were trying to shorten the deionization time.

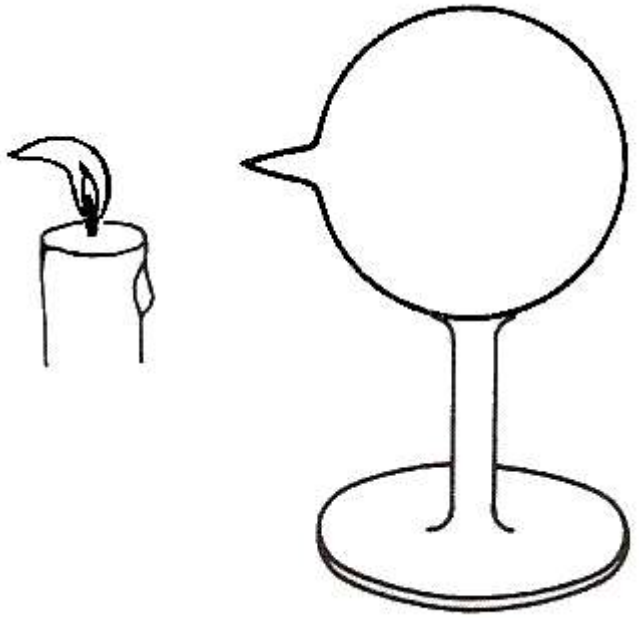
So, in the deionization process, in each case, there is a tendency to such a course that the deionization time is as short as possible. But you should not look for any deliberate action in this, because no one and nothing sets any goals. Because in every case, although it may be difficult to notice, the processes of the return of ions to the state of neutral atoms and the movements of ions accompanying these processes take

place as a result of the interaction between all the components of matter (located in this area), and all these interactions run in accordance with with the principle of MPP.

Electrification of the atmosphere around the object

In the case of an electrified spherical object, we deal not only with an electrified object, but also with electrified air around it. There are a lot of ions around this ball - they interact with each other and there is a tendency for them to drift apart. But there is also a second tendency, namely, between the ions and neutral atoms (molecules) of the atmosphere, and between them and the sphere, there are interatomic bonds that prevent uniquely ionized atoms from moving away from each other and from the sphere. The ball is a solid with an even, smooth surface, and in this case the latter tendency plays a decisive role. Yes, an electrified ball gradually loses its electrostatic charge, but it happens slowly.

The situation with the distribution of the electrostatic potential of the ball will be radically different if it has a conical projection on one side. In this case, the ionized atoms that are located around the conical projection are in the region where the first tendency prevails, which tends to distance the ions from the ionized sphere. Therefore, the ions are moved away with the neutral atoms mixed with them, and the phenomenon can be observed as an electrostatic wind. You can blow out a candle with such a wind, as shown in the figure below.



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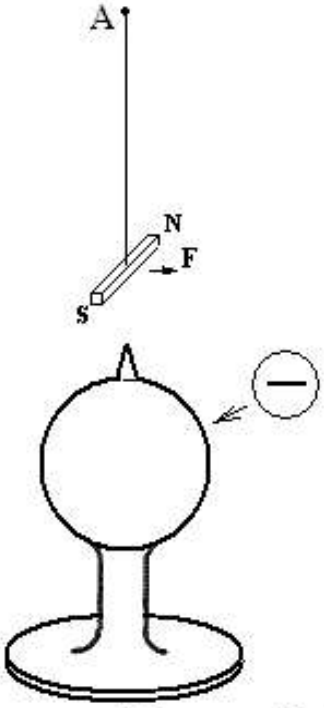
Here you can recall the information that cosmic rays were discovered by means of experiments with an electroscope. A balloon was used during the experiments and electroscope discharge time measurements were made at different altitudes. During the experiments, there were two phenomena that contributed to the change in the discharge speed of the electroscope. One phenomenon was the additional ionization of certain atoms of the atmosphere just around the elements of the electrified electroscope. This phenomenon was due to cosmic rays. In this way, additional foci of uneven ion distribution were created, which changed the electroscope discharge rate. The second phenomenon was related to the density (amount) of ionized atmospheric gases that directly surrounded the elements of the electroscope. This density (quantity) varied with the height of the balloon. The higher the balloon was located, the lower the atmospheric pressure was, the less electrified gas was around the elements of the electroscope, the lower the actual charge of the electroscope, and therefore the faster the electroscope was discharged. To observe the latter phenomenon, you do not necessarily need to ascend with the balloon to a great height. For this purpose, you can use the barium chamber and observe how the discharge time of the electroscope increases with increasing pressure in the chamber, and when the pressure in the chamber is reduced, the effect is opposite.

Again about the influence of electrostatic charge on a magnet
Coming back to the electrostatic wind, at http://weirdscience.net23.net/?M%C5% 82ynek + Franklin you can see the Franklin mill, which rotates as a result of directional ion emission and the formation of electrostatic wind. The figure below shows schematically an experiment in which an electrostatically charged ball with a cone is deflected by a magnet suspended on a thread.



Swinging a suspended magnet with a ball charged with a negative electrostatic charge

I wrote about this experience in the article "Electrostatic impact on a magnet" (http://pinopa.narod.ru/Uni_El_stat-magnes_uk.pdf). There, however, it is about the electrostatic effect of the sphere. In such a case, in order for the magnet to deflect while hanging on the thread at point A, it is necessary to accumulate a very large electrostatic charge on the ball.

In a situation where the ball has a conical projection, a much lower electrical voltage of the ball may suffice to deflect the magnet on the thread. In such a situation, by blowing some smoke near the cone, you can literally see the electrostatic jet forming and see the flow of ionized air around the magnet. The air stream flowing from below will undoubtedly act on the magnet aerodynamically, pushing against the bar and trying to lift it up. But the ions that will flow upwards around the magnet are actually electric current. If it is large enough, interacting with the magnet will visibly affect its deflection on the thread. This experiment shows that the electrostatic charge of the sphere (which as a whole is stationary; through the interaction of the electrostatic field with the magnetic field) affects the movement of the magnet. It also shows what the mechanism of such interaction is.

More a**bout the relativity of concepts and errors in the science of matter**
It follows from the above that both the magnetic field and the electrostatic field, especially electrostatic charges, are relative and conventional concepts. Behind these concepts is the interaction of the structural components of matter - protons, neutrons and protoelectrons (those from the physical vacuum and those from the atomic structure). The assignment of plus and minus signs to electrostatic charges, which took place at the end **) of the 19th century, did not become the cause for the development of real, reliable physical knowledge. Instead, it has become a fairly solid basis for the development of a substitute for knowledge about the structure of matter. On this basis, such a substitute of knowledge has developed in theoretical physics and it is passed on to the next generations of physicists. This quasi-knowledge occupies a branch of physics called quantum mechanics.

*) If you start laughing here and you think that I am writing about what everyone knows very well and there is no need to write about it, then you are wrong. It's an ordinary thing in physics - you assign a name to a phenomenon and use it in descriptions as if you already knew what it was. An example of an application of this method is quantum mechanics. It is there, if anything gets called by a certain name, then it is treated as if everything was already known about it, or at least it was known to physicists - quantum mechanics who write and talk about it. In that case, the thing, of course, does not exist, but there is a word that is treated as a thing.
**) The terms positive electricity and negative electricity were already used by Franklin in the mid-18th century, but he used them to denote charges in the opposite way to what is used today.

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