

Ether and Ethereal Field

Anatoli Bedritsky

Abstract.

This article describes the essence of the ether and the ethereal field, being by essence of all kinds of fields (nuclear, electric, magnetic and gravitational) are described. This article is one of a series of articles forming "Real theoretical physics" on the basis of existence of an ether. This physics is strictly materialistic and opens essence of all physical phenomena occurring because of interaction of an ether and elementary particles of matter.

1 Essence of Ether

The most rarefied matter in the Universe, which consist of the separate mats, which are not connected one whit others and which moves by in emptiness in different sides, is called *ether*. The vacuum and the cosmos (space) without elementary particles represents an ether. The ether is also the intervals (gaps) between elementary particles in atoms, bodies, gravibodies and in atmosphere.

The mats of the ether between collisions make the rectilinear accelerated motion, not influencing each on other. At collisions the mats change the direction and the velocity of motion. If two mats is moving to each other with enough big velocity, then at collisions one of the mats can break on impact section on two different mats, due to that the mats have different mass and the different form with verges on surface. Because of the breaks, the average mass of mats decreases indefinitely, but the general properties of the ether thus do not change. If the mats have small breaks off, then they get more spherical form. Due to that the mats are subdivided into three kinds: spheremats, ovalmats and longmats. Spheremats have big mobility, because after collisions they fast leave one from other, having changed a direction and velocity of motion. The longmats have small mobility, because after collisions they have mainly rotary motion and leave one from other

with a small velocity. Therefore the longmats form an congestions representing elementary particles. (See article "Formation of neutrons, protons and electrons").

The average distances between the mats in an elementary particle are of the same order of magnitude as the dimensions of the mats, whereas the average distances between the mats of ether are much more than the dimensions of the mats. The mats, which composes the ether are called the *ethermats*.

2 Intensity of Momenta of Ether in Given Direction

Since the direction and the value of the momentum of each mat constantly vary as a result of their accelerated motion and collisions, then each mat has not a constant but an instantaneous momentum. The vector sum of the momenta of mats of the ether, which pass through a unit of area of a conditional plane in one side in a unit of time, is called the *intensity of momenta of the ether* in a given direction (the direction normal to the conditional plane) and is denoted by E .

The intensity of momenta of the ether in a given direction is defined as

$$E = \frac{P_1 + P_2 + \dots + P_n}{S \cdot t},$$

where P_1, P_2, P_n are the vectors of momenta of separate mats, which acts perpendicularly on one side of conditional plane; S is the area of the conditional plane and t the time of measuring.

3 Uniform and Nonuniform Ether

Ether, whose intensity of momenta is the same in all directions, is called the *uniform ether*. Fig. 1 shows the intensity of momenta of the uniform ether.

No ideally uniform ether does exist. The most uniform ether is the cosmic ether at the place most distant from the gravibodies. Ether, whose intensity of momenta is not the same in all directions is called the *nonuniform ether*. The ether, which is in gravibodies and in bodies, between neutrons, protons and electrons, and also the ether in atmosphere on an gravibody is a nonuniform. Fig. 2 shows the directed vectors of the intensity of momenta

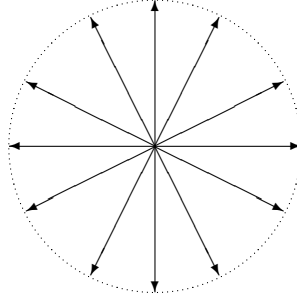


Figure 1: Vectors of momenta for uniform ether.

of non-uniform ether at a point in different directions, if the point above an gravibody.

4 Ethereal Field. Strength of the Field (Momenta of the Field)

The non-uniform ether without the part of his uniform ether is a one-sided momenta of the ether, and is called *ethereal field*, or simply the *field*. The maximal difference between the values of the intensity of momenta of an ether at a given point in two opposite directions is called the *strength of the field* or the *intensity of momenta of the field* at the given point.

$$E = E_{\max} - E_{\min},$$

where E_{\max} is the maximal intensity of momenta at given point and E_{\min} is the minimal intensity of momenta at this point.

5 Limit Velocity and Limit Momentum of Ethermats.

Motion of mats of an ether between their collisions have a accelerated acceleration. The velocity of the motion of the ethermats cannot to increase infinitely, since for this infinite motion is required an motion without collisions, that is impossible because the ether consist of infinite quantity of

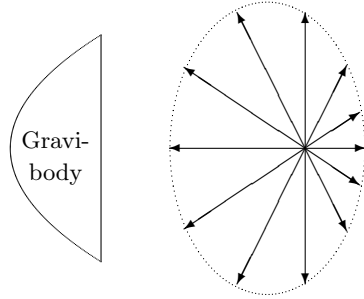


Figure 2: Vectors of momenta for non-uniform ether.

mats. At collisions with each other, the ethermats can sharply increase or reduce the velocity and the acceleration of their motion. If two ethermats is moving to one another, then the collision of these ethermats decreases the velocity and the acceleratedness of motion of both mats. If two ethermats is moving consecutive, then the collision of these ethermats increases the velocity and the acceleratedness of the forward ethermat and decreases the velocity and the acceleratedness of the second ethermat. The motion of ethermats can be defined relatively to the surrounding uniform ether, in which move the ethermats.

As the spheremats at collisions have the central impact and thus get mainly a motion, and the longmats at collisions have mainly noncentral impact and thus get mainly a rotation around of own center of mass, then the spheremats have incomparably a greater average velocity of motion than the longmats. Even an fast spheremat cannot at collision with a longmat considerably increase the velocity of motion of the longmat.

The mats, which have a greater mobility and a greater mass, have a greater impulse and consequently they in a smaller measure change the direction of motion and the velocity in collision with others mats. The average velocity of motion of a given mat, taking into account its collisions with the others mats of the surrounding ether, is called the *limit velocity* of given mat. The momentum of mat, which corresponds to the limit velocity, is called the *limit momentum*. The limit velocity of spheremats is much more than the limit velocity of ovalmats.

The limit velocity of given mat of ether is defined:

$$V_{\text{lim}} = S \cdot M \cdot K$$

where S is the mobility (sphericity) of mat, M is the mass of mat, K is the coefficient proportionality.

The limit momentum of given mat of ether is defined:

$$P_{\text{lim}} = M \cdot V_{\text{lim}} = S \cdot M^2 \cdot K$$

Half of all mats of the ether of space have the limit velocity of motion more 300000 km/sec, but the other half of all mats of this ether of space have the limit velocity of motion less 300000 km/sec, what is defined in article "Physical principle of formation and essence of radio waves". The velocity of mats 300000 km/sec is called the *average limit velocity* of mats of ether of space.

6 Propagation of Ethermats, having Different Mobility, in the Universe.

All mats have different mass and form. Than more the limit momentum of given mat, so in a smaller measure the mat changes the direction of the motion at collisions in the ether, and the mat in a greater measure moves rectilinearly.

Spheremats have a bigger sphericity and accordingly a bigger mobility than the ovalmats, due to that spheremats have higher velocities of motion and hence momenta than ovalmats. Therefore, the spheremats move in ether more dynamically and are distributed more uniformly in all the parts of the universe than other mats. As a result, concentration of spheremats in bodies and gravibodies is the same as in the ambient rarefied cosmic ether.

Ethernats of the cosmic ether have the longest average travel between collisions and correspondingly the highest average velocity and momentum, since in the cosmic space they collide only with each other and very rarely with single nucleons and electrons. The average velocity of the fast ethermats of the cosmic ether depends mostly on the frequency of their collisions with gravibodies.

Ethernats of the intrabody have the shortest average travel between collisions and correspondingly the lowest average velocity and momentum, since in a gravibody and in a single body ethermats collide not only with each

other, but with elementary particles (nucleons and electrons) of gravibodies and bodies.

Ethermats of the atmospheric ether have a slightly lower average velocity and momentum than the ethermats of the cosmic ether, but considerably higher than the ethermats of the intrabody ether, since in the atmosphere the ethermats have considerably less collisions with the nucleons of nuclei of atoms than inside a gravibody. When moving, the ethermats of the atmospheric ether can enter gravibodies (or bodies) and leave them. But when entering a gravibody, the slow ethermats reduce there its average velocity and momentum; due to this, upon leaving the body they are being pushed back into the body by faster ethermats of the atmospheric ether.

Due to the fact that the slow ovalmats have a higher probability of entering a body than leaving it, the concentration of ovalmats in the intrabody ether is considerably higher than in the atmospheric ether; therefore, the intrabody ether has a higher density than the atmospheric ether. It may be said that slow ethermats are connected with the body, whereas intermediate and fast ethermats are free to enter a body from the atmospheric ether and freely leave the body into the atmospheric ether.

Although the concentration of ovalmats in the cosmic ether is lower than in the intrabody ether, but even in the cosmic ether the concentration of ovalmats is higher than that of spheremats. Because of action of gravitational field the density of the ether around a gravibody is more than the density of the space ether far from the gravibody. The greatest density of the ether is in the gravibodies.

Conclusion

After when Einstein has rejected the existence of the ether, the development of physics by present time became deadlock. Only at considering of existence of the ether I managed to open the principle of formation of all known elementary particles, the structure of nucleuses of atoms and to open the principle of formation of the ether field, which is the essence of all fields (nuclear, electric, magnetic and gravitational).