## Abstract:

The article shows a simple way in explaining gravity and magnetism.

To answer this question, I adopted couple of pivotal assumptions, without which I wouldn't trouble myself to explain my stance in terms of cosmology.

1. The universe is a closed system (finite), limited by lack of space "beyond" it.

2. The universe is not expanding.

3. Prematerial state of the universe contained only primordial, homogeneous ether, the building block of all forms of matter.

To provide some sense on gravity issue, you should have a reasonable scenario as a whole, and that means that everything must seamlessly interact with each other - must logically be explainable and do not violate the known laws of nature. Thus explanation of functioning of the universe requires re-introduction of ether (i.e. primordial, globular homogeneous physical entities without inner structure, of magnitude far beyond Planck length). Without it, all the speculations and researches are in vain. In addition, by means of ether there could be explained a dual character of light which in the medium of ether causes its disturbance manifested by forming and accompanying it wave. Ether was widely considered to be motionless physical entity. I do not agree with it for the obvious reason. Now, if we liken ether to the motionless dense fog, its state could be disturbed by entering into it a vehicle. Thus, by analogy comes to conclude that the movement of the ether present in the nucleus of the universe, radius of which amounts around 4.6\*10^10 l.y. is resultant. What's more, ether in the vicinity of astronomical objects is converted into a magnetic field, weakening as it moves away from them, becuse any form of matter acts like magnet. It's due to rotational motion of objects like planets or galaxies and their inner structure like e.g. atoms. There is no difference in anatomy (lack of inner structure) between ether (its single component I dubbed "premagnetic") and magnetic field (its single component I called "magnetin").

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Ether or pre-matter (far beyond Plack length)

However, what differentiates them is their movement, changing its behaviou. In case of ether in interstellar space resultant motion, and in the case of magnetic field of the same ether, orderly motion caused by rotating astronomical objects, and rotation of particles and obviously (imperceptible) motion of ether beyond universal nucleus due to its rotation – according to my conjectures. Taking into account the universal nucleus as a whole, its complement constitutes only the "pure" ether, devoid of cosmic background radiation. Such an idea implies occurrence of two opposing forces: of the universal nucleus and ether. Thus seeking trials in the vast space of the universe of the so-called dark matter is nothing else but a search for the causative factor of gravity, or ether, existence of which is notoriously declined. And what about dark energy? - one may ask. Now, if we assume the existence of ether, we would automatically have the owner of energy. The

reason is that pure energy does not occur in nature as a spontaneous physical entity. If we acknowledge the existence of primordial ether, then thereby it can be considered as the causative factor of the creation of matter as out of nothing, nothing can arise and something cannot turn to nothing. In a word, it is the same thing that could equally well be baptised as prematter. The radius of the finite universe that I calculated (because only finite is possible as in nature infinities don't occur) amounts to minimum 6.2\*10^117 l.y. Although its vastness in comparison with the smallest physical "speck" is a scale which cannot be compared with anything else, before the birth of matter was just ether. It was a prematerial state of nature. This condition was characterized by the fact that there was no any other physical entities in addition to said primordial homogeneous ether, which by its (homogeneous) form could "produce" gravity. This can be understood in such a way, that in ether alone gravity did not occur as it formed oneness (one "organism"). One might ask a question what was the essential difference between the material universe and prematerial one? Thus, in the first one gravity was not existent, in the latter is. But the universe itself as it was, still is of the same magnitude. This means that it contains the same material (building block of all forms of matter) as originally, but some portion of it was transformed to a high degree of complexity of forms (due to accidental disturbance in the uniform distribution of ether at some place in the universe) according to unrecognised laws of nature. Nevertheless, the said disturbance initiated rotational motion in the universe. Such a transformation of ether into matter continued until its bound quantity equalized quantity of its primordial form. The first objects that were formed were clouds of hydrogen, which gave rise to the further evolution of matter. After the re-introduction of ether (which could be named prematter as well), there follow two essential things, necessary to understand the mechanism of the gravity.

I. Firstly, you need to take into account these places in the universe, which constitute a perfect insulation.

Such places are:

1. Free spaces between the spherical components of the ether. They must be such, otherwise the universe would be united in one mass. Besides, there is a limit, end of which is the smallest form of physical entity, which is the ether .

2. Another such place is confines of the universe. Thus the second insulator is a place "outside" the universe, constituting lack of space. This is a limitation which does not allow any physical entity to get out "outside" the universe.

As far as the second delimiter is obvious, the void space is not understood clearly. Well, there is a perfect vacuum in the universe. It is between premagnetics, or the ether constituent units (whose understanding is generally ascribed to the whole). Nevertheless, these empty spaces do not play role as an insulator of interactions of physical entities. The reason is that all forms of matter (created from ether) are of magnitude larger than empty spaces despite they are present in them too. Thus, if there were a perfect vacuum areas partitioning physical entities, they would constitute places where there were no interaction between any of the forms of matter on opposite sides of the septum. I would like to call attention to the fact that space is also to some extent the insulator (like dry air to a certain limit), nevertheless, by means of ether vacuum is a conductor which allows interactions between all physical entities of the universe.

II. Secondly, the next essential thing is mutual contact of all forms of matter, which is secured by ether (or prematter).

Physical entities "sense" each other. This sensing can be illustrated by the following manner:

Well, the easiest is to use a certain analogy. Imagine two meshed gears. If they spin in opposite directions, it will be equivalent to their mutual attraction. However, the trial to spin them in the same direction will result in their getting jammed or resistance (the effect of repulsion). There must be physical contact between physical entities. This opposition and compliance of directions mean attraction and repulsion.

The same principle applies to gravity. Something must have physical contact with something that the pulling could occur. But in nature such physical contact is cleverly disguised by "empty space". And that's the reason for not recognizing this direct pull. And how this is technically performed, can be illustrated as follows:

Magnetism, electricity and gravitation have one common feature, which is motion of ether and matter. Science, unfortunately, has no insight into subtleties of nature, thus I cannot provide any details of precise description of these phenomena. So, my intuitive explanation has to be general. It's obvious thing, that all forms of matter are in a constant motion and strength of magnetic field depends (among other things) on rotational velocity of bodies. Any object on the one hand absorbs ether and on the other hand ejects it. The faster the body spins the faster ether flows through it and around it. Attraction of bodies consists then in coupling of rotating along with bodies ether, which means two bodies attract each other when they rotate in opposite directions (clockwise vs anticlockwise). Thus, their magnetic fields unite. The opposite situation, i.e. repulsion, happens when two bodies rotate in the same direction (both clockwise or both anticlockwise). And why it happens so? The answer is simple. The cosmic medium, or ether, also has its braking properties. On the other hand we know that all physical phenomena proceed choosing the least resistance. In case of attraction of bodies, that are rotating in the opposite directions, they obviously "choose" the "easiest" way, which means that its "easier" to unite their streams of ether / electrons, than to eject them into space, because otherwise it would create its resistance. Analogically happens in case of repulsion. The two bodies (rotating in the same direction) "prefer" to eject ether / electrons into space (the easiest way) thus they have to repel each other to achieve it. That means space turns out more "comfortable" for them, than "keeping together" when reversal of poles, in other words directions of spins, is impossible. Magnets have the same preferences. In case of gravity, the universal nucleus opposes masses of the universal ether. In this case there is no choice of taking easier way by any of them. To illustrate it, imagine a balloon in a weightlessness environment (closed, so the circulating air will not inflate or deflate it) filled with air. In the middle of the balloon is placed a vacuum cleaner. When actuated, it will suck the air from one side and on the other throw it away. It will obviously cause its rotation. The same is true in the closed system of the universe. It's just that this "vacuum cleaner" or nucleus of the universe pulls ether from all sides and simultaneously ether pulls matter, as action causes counteraction. Summing up, the universal nucleus (containing all forms of matter) must rotate as a whole, thus have its axis. However, its rotation must be so slow that practically imperceptible, thus it's the reason of such a weak gravity. So, mechanism of gravity consists in rotating universal nucleus in the vast ocean of ether. In this case ether is absorbed by the cluster of the universal nucleus and at the same time ejected. This results in stretching of galaxies by masses of rotating ether. The biggest pull (stretching force) of ether are experiencing those galaxies that are at the outskirts of the universal nucleus.

It seems very likely that the universal nucleus (assuming there are no farther astronomical objects beyond our observational reach) has its axis, poles and rotates (very slowly - proportionally to the gravitational force) but such good premises that could possibly determine it are:

- The poles and axis of the universal nucleus, let's name it N - S, should be sought between opposed great voids

- The equator should be sought where the filament galaxies stretch in the same plane as equator. In other words parallel to the sought equator

- Some irregularities could be explained that the universal nucleus has performed merely couple of rotations since creation of matter (some 14 billion years ago if properly calculated).

- Taking the above circumstances into account, the universal nucleus should resemble a sphere flattened at the poles.

In a word, gravity is forced by gyration of matter. If the universe was not a closed system (limited by lack of space "beyond" it), I would not trouble to explain the phenomenon of gravity.